

Table III: Human telomerase reverse transcriptase (TERT) Hammerhead Ribozyme and Target Sequence

nt. Position	Ribozyme Sequence	Seq ID Nos.	Substrate Sequence	Seq ID Nos.
13	C3CAGCAG CUGAUGAG X C3AA A33CA333		C3CTG33T C CT3CTGCG	
68	3CA3C333 CUGAUGAG X C3AA A3333333		33CG333T C C3333333	
90	3CA3CA33 CUGAUGAG X C3AA A3333CA33		33T3333T C CT333333	
173	CCU3C333 CUGAUGAG X C3AA A3333333		CA33CACT A C3333333	
145	3333CA33 CUGAUGAG X C3AA A3333333		3333CA3T T CT333333	
136	C3333CA3 CUGAUGAG X C3AA AA333333		3333CA3T T CT333333	
194	C3333333 CUGAUGAG X C3AA A3333333		C333333T T T3333333	
195	33333333 CUGAUGAG X C3AA AA333333		3333333T T C3333333	
196	A3333333 CUGAUGAG X C3AA AAA33333		3333333T T C3333333	
254	33333AA3 CUGAUGAG X C3AA A3333333		C333333T C CT333333	
267	CCU33333 CUGAUGAG X C3AA A3333333		CCCT333T T C3333333	
268	ACCUG333 CUGAUGAG X C3AA AA333333		CCCT333T C C3333333	
279	U3A333CA3 CUGAUGAG X C3AA ACA33333		CA33333T C CT333333	
351	C3AA3333 CUGAUGAG X C3AA A3333333		3333333T T C3333333	
352	3333AA33 CUGAUGAG X C3AA AA333333		CT33333T C C3333333	
357	3CA33333 CUGAUGAG X C3AA AG333333		CTT3333T T C3333333	
358	A3333333 CUGAUGAG X C3AA AA333333		TTT3333T C C3333333	
399	U3333333 CUGAUGAG X C3AA A3333333		C3A3333T T CACC3333	
400	CU333333 CUGAUGAG X C3AA AA333333		3A33333T C ACC33333	
420	U3333333 CUGAUGAG X C3AA A3333333		3333333T A C3333333	
505	A3333333 CUGAUGAG X C3AA ACC33333		GT33333T T CACC3333	
506	CA333333 CUGAUGAG X C3AA AA333333		T333333T C ACC33333	
529	A3333333 CUGAUGAG X C3AA A3333333		T333333T C TTT33333	
531	CC333333 CUGAUGAG X C3AA AG333333		C333333T T T3333333	
532	ACC33333 CUGAUGAG X C3AA AA333333		3333333T T GT333333	
545	3CA33333 CUGAUGAG X C3AA A3333333		T333333T C C3A33333	
558	ACC33333 CUGAUGAG X C3AA A3333333		CT33333T A C3A33333	
580	C3A33333 CUGAUGAG X C3AA ACA33333		3333333T A C3A33333	
589	3CA33333 CUGAUGAG X C3AA A3333333		TACC333T C 33333333	
602	CC333333 CUGAUGAG X C3AA A3333333		CT33333T C A3333333	
620	33333333 CUGAUGAG X C3AA A3333333		CAC3333T A GT333333	
644	GC333333 CUGAUGAG X C3AA A3333333		GAA3333T C T3333333	
670	CC333333 CUGAUGAG X C3AA A3333333		G3A3333T A G3333333	
676	GC333333 CUGAUGAG X C3AA A3333333		CAT3333T C A3333333	
691	CC333333 CUGAUGAG X C3AA A3333333		G333333T C C3333333	
749	CAAC3333 CUGAUGAG X C3AA A3333333		G333333T C T3333333	
750	CCU33333 CUGAUGAG X C3AA A3333333		T333333T T G3333333	
808	CCU33333 CUGAUGAG X C3AA A3333333		A333333T T G3333333	
819	33333333 CUGAUGAG X C3AA A3333333		G3A3333T C C3333333	
863	CACACAGA CUGAUGAG X C3AA ACC33333		ACC3333T T T3333333	
864	CCACACAG CUGAUGAG X C3AA AAC33333		CC33333T T CT333333	
865	ACCACACA CUGAUGAG X C3AA AAA33333		CGT3333T C T3333333	
876	UGG33333 CUGAUGAG X C3AA ACC33333		T333333T C ACC33333	

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906	CCUCCAAA	CU3AUGAG	X	CGAA	AG3U33CU		AGCCACCT	C	TTTGGAGG	
908	AACCUCCA	CU3AUGAG	X	CGAA	AGA33U33		CCACCTCT	T	T33AG33T	
909	CAACCUC	CU3AUGAG	X	CGAA	AA3A33U3		CACCTCTT	T	33AG33TG	
922	GU3CCAGA	CU3AUGAG	X	CGAA	AG33CAAC		GGT3CGCT	C	TCT33CAC	
924	3C3UGCCA	CU3AUGAG	X	CGAA	AGA333CA		TG33CTCT	C	T33CA3GC	
939	AU333UG	CU3AUGAG	X	CGAA	AG33333C		GG33CACT	C	CCACCCAT	
943	33C33A33	CU3AUGAG	X	CGAA	AU3333U3		CCAC33AT	C	CT33333C	
981	3C3AU3U3	CU3AUGAG	X	CGAA	AU333333		CC3333AT	C	CACAT33C	
987	3U33333C	CU3AUGAG	X	CGAA	AU3U33AU		ATCCACAT	C	3C3333AC	
1001	3UC3CA33	CU3AUGAG	X	CGAA	AC3U33U3		CACCA3GT	C	CT3333AC	
1006	333333AC	CU3AUGAG	X	CGAA	AG33333U		ACAC33CT	T	3T333333	
1009	CA333333	CU3AUGAG	X	CGAA	ACAA3333		CG33TT3T	C	CC3333TG	
1029	UCU33333	CU3AUGAG	X	CGAA	ACAC3333		CC3333GT	A	333333AG	
1047	A3UA3AG3	CU3AUGAG	X	CGAA	A3UG3U33		CAA3CACT	T	CTCTACTT	
1048	GA3UA3AG	CU3AUGAG	X	CGAA	AA3U33U3		AA3CACTT	C	CTCTACTC	
1051	GA33A3UA	CU3AUGAG	X	CGAA	A33AA3U3		CACCTCTT	C	TACT3CTC	
1052	CU3A33AG	CU3AUGAG	X	CGAA	AGA333AA3		CTT3CTCT	A	CTCTCA33	
1056	CC3CU3AG	CU3AUGAG	X	CGAA	A3UA3A33		CTCTACTT	C	CTCA33GC	
1059	U3U333CU	CU3AUGAG	X	CGAA	AG3A3UA3		CTACTCTT	C	AG3333CA	
1066	GU3A33AG	CU3AUGAG	X	CGAA	AG33333C		333333CT	C	CTTCTACT	
1069	U3A3UA33	CU3AUGAG	X	CGAA	A33A333C		333333CT	T	CTTACTCA	
1090	CU3A3UA3	CU3AUGAG	X	CGAA	AA33A333		CCCTCTTT	C	CTACTCA3	
1093	GA3CU3AG	CU3AUGAG	X	CGAA	A33AA33A		TCCTCTCT	A	CTCA33CT	
1096	A3A3A3CU	CU3AUGAG	X	CGAA	A3UA33AA		TTCTACTT	C	AGCTCTCT	
1101	GCCUCAGA	CU3AUGAG	X	CGAA	AG3U33AU		ACTCA3CT	C	TCT3AG3C	
1103	GG33CUCA	CU3AUGAG	X	CGAA	AGA33CU3A		TA33CTCT	C	T3A333CC	
1127	GA33CUCC	CU3AUGAG	X	CGAA	AG3333CAG		CT3333CT	C	33A333CT	
1135	GU3UC3AC	CU3AUGAG	X	CGAA	AG3CU3CC		CG3A33CT	C	3T3333AG	
1147	CCCA3AAA	CU3AUGAG	X	CGAA	AU3333U3		3A3ACCAT	C	TTTCTG33	
1149	AA33CA3A	CU3AUGAG	X	CGAA	AGA333UC		3ACCATCT	T	TCT333TT	
1150	GAAC33AG	CU3AUGAG	X	CGAA	AA3AU33U		ACCATCTT	T	CT3333TT	
1151	GGAA33CA	CU3AUGAG	X	CGAA	AA3AU333		CCATCTTT	C	T3333TTCC	
1157	GG33CU33	CU3AUGAG	X	CGAA	AC3CA3AA		TTCT33GT	T	CCAG33CC	
1158	A3333CU3	CU3AUGAG	X	CGAA	AA33CA3A		TCT333TT	C	CA3333CT	
1181	CCU33333	CU3AUGAG	X	CGAA	AGU333U3		CA333ACT	C	CC3333AG	
1191	GG33333C	CU3AUGAG	X	CGAA	ACCU3333		CC3333GT	T	333333CC	
1212	UU3333AG	CU3AUGAG	X	CGAA	AG3333U3		CCAG33CT	A	CT3333AA	
1233	3CU3CA3A	CU3AUGAG	X	CGAA	ACA3333C		333333GT	T	CT3333AG	
1234	A3CU33AG	CU3AUGAG	X	CGAA	AA3CA333		CC3333TT	T	CT3333GT	
1235	CA3CU3CA	CU3AUGAG	X	CGAA	AA3CA333		CC3333TT	C	T33A33CT	
1246	UG3U33CC	CU3AUGAG	X	CGAA	AG3AG3U3		3AG333CT	T	GG3A33CA	
1269	3CAC3333	CU3AUGAG	X	CGAA	AG3333CA		GT3333CT	A	CG3333TC	
1279	3UCU33AG	CU3AUGAG	X	CGAA	A33AC33C		GG3333CT	C	CTCA33AC	
1282	UG3333CU	CU3AUGAG	X	CGAA	AG3A33CA		GT3333CT	C	AA3AC33A	
1312	3CU3333U	CU3AUGAG	X	CGAA	AC3333AG		GT3333CT	C	AC3333AG	
1330	CG3333CA	CU3AUGAG	X	CGAA	ACA3333C		GG3333GT	C	TGT3333C	
1356	CCG333CA	CU3AUGAG	X	CGAA	A33333UG		CCAG33CT	C	TGT3333C	

1394	CAACAGGC	CUGAUGAG	X	CGAA	ACGGG33U		ACCCCGGT	C	GCTTGGTG	
1411	UGGUGGCG	CUGAUGAG	X	CGAA	AGGAGGUG		CAGCTGCT	C	CGGCA3CA	
1440	CGAAGGCG	CUGAUGAG	X	CGAA	ACGCGUG		GCA3T3T	A	CGGCTTGG	
1446	CGCGACG	CUGAUGAG	X	CGAA	AGCGGUA		GTA3GGCT	T	CGTGG3GG	
1447	GGCGGACG	CUGAUGAG	X	CGAA	AA3CGUA		TAG3GCTT	C	GTGGGGG	
1486	GAGCGGCA	CUGAUGAG	X	CGAA	AGCGGUG		CGAGGCTT	C	TGGGGGCT	
1494	UGUGGCGG	CUGAUGAG	X	CGAA	AGCGGCA		CTGGGGCT	C	GA3GCA3A	
1515	UGGUGAGG	CUGAUGAG	X	CGAA	AGCGG3U		AGCGGCTT	T	CGTCA3GA	
1516	UGGUGAGG	CUGAUGAG	X	CGAA	AA3CGGCG		CGCGGCTT	C	CGCA3GAA	
1519	GGGUGGCG	CUGAUGAG	X	CGAA	AGGAAGCG		CGCTTCTT	C	AG3AA3AC	
1536	GGGAGAGG	CUGAUGAG	X	CGAA	AGGUGGUG		GAAGAA3T	T	CATCT3CG	
1537	AGGGAGAG	CUGAUGAG	X	CGAA	AA3UGGUG		AA3AA3TT	C	ATCTCGCT	
1540	CGCA3GGA	CUGAUGAG	X	CGAA	AGGAAGUG		AA3TT3AT	C	TGGCTGGG	
1542	UGCGGAGG	CUGAUGAG	X	CGAA	AGAGGAAG		GTTCATCT	C	CGTGGGGGA	
1564	UGCA3GGA	CUGAUGAG	X	CGAA	AGGUGGCG		GGCAAGCT	C	TGGCTGCA	
1566	CGGCGAGG	CUGAUGAG	X	CGAA	AGAGGUGG		GAAGCTCT	C	GCTGCA3G	
1610	GGGCGGCG	CUGAUGAG	X	CGAA	AGCGGAGU		ACTGGGCT	T	GCGTGGCG	
1633	ACACAGCG	CUGAUGAG	X	CGAA	AGCGGUGG		CGAGGGCT	T	GCGTGTGT	
1642	GGGGCGGG	CUGAUGAG	X	CGAA	AGACAGCG		GGCTGTGT	T	CGGGCGCG	
1643	UGGGGCGG	CUGAUGAG	X	CGAA	AAACAGCG		GCTGTGTT	C	CGGGCGCA	
1661	CUGACGCA	CUGAUGAG	X	CGAA	AGGUGGUG		AGCACGCT	C	TGGGTGAG	
1675	UGGGGCA3	CUGAUGAG	X	CGAA	AGGUGGCG		GAGGAGAT	C	CTGGGCAA	
1686	AGGCGAGG	CUGAUGAG	X	CGAA	AGGUGGCG		GGGCAAGT	T	CGTGCAGT	
1687	CA3UGCA3	CUGAUGAG	X	CGAA	AA3UGGCG		GGCAAGTT	C	CTGCAGTG	
1710	CGAGGAGG	CUGAUGAG	X	CGAA	AGACAGUG		GAGTGTGT	A	CGTGTGCG	
1714	AGGUGGAG	CUGAUGAG	X	CGAA	AGGUA3AG		GTGTAGCT	C	GTGGA3CT	
1717	AGCA3GUG	CUGAUGAG	X	CGAA	AGCA3GUA		TAGCTGCT	C	GAGCTGTCT	
1726	AAAGAGCG	CUGAUGAG	X	CGAA	AGCA3GUG		GAGCTGCT	C	AGGTCTTT	
1731	AAAA3AAA	CUGAUGAG	X	CGAA	AGCGAGCG		GTCAG3GT	C	TTTCTTTT	
1733	AUAAAA3A	CUGAUGAG	X	CGAA	AGAGCGGA		TCA3GTCT	T	CGTTTTAT	
1734	CAUAAAA3	CUGAUGAG	X	CGAA	AGAGCGUG		CAG3GTCT	T	CTTTTTAT	
1735	ACAUAAAA	CUGAUGAG	X	CGAA	AAA3AGCG		AGGTCTTT	C	TTTTATGT	
1737	UGACA3AA	CUGAUGAG	X	CGAA	AGAAAGAG		GTCTTTCT	T	TTATGTCA	
1738	GUGACA3A	CUGAUGAG	X	CGAA	AGAAAG3A		TCTTTCTT	T	TATGTCA3	
1739	GGUGACA3	CUGAUGAG	X	CGAA	AAAGAAAG		CTTTCTTT	T	ATGTCA3G	
1740	GGGUGACA	CUGAUGAG	X	CGAA	AAAA3AAA		TTTCTTTT	A	TGTCA3GG	
1744	GUUGGCGU	CUGAUGAG	X	CGAA	ACA3AAAA		TTTTATGT	C	AGG3A3AG	
1754	UGGUGUGA	CUGAUGAG	X	CGAA	AGGUGGUG		GAGCAAGT	T	CAAAA3GA	
1759	UGGUGUGG	CUGAUGAG	X	CGAA	AAAGGUGG		AGCAAGTT	T	CAAAA3GA	
1760	GUUGUGUG	CUGAUGAG	X	CGAA	AAAGGUGG		CGAGGTTT	C	AAAA3AAC	
1774	UAGAAAAA	CUGAUGAG	X	CGAA	AGCGUGUG		AAAGGCTT	C	TTTTCTTA	
1776	GGUAGAAA	CUGAUGAG	X	CGAA	AGAGCGUG		CAGGCTCT	T	TTTTCTAG	
1777	CGGUGAGAA	CUGAUGAG	X	CGAA	AGAGCGUG		AGGCTCTT	T	TTTTCTAG	
1778	CGGUGAGA	CUGAUGAG	X	CGAA	AAAGAGCG		GGTCTTTT	T	TCTACCGG	
1779	UGCGGUGAG	CUGAUGAG	X	CGAA	AAAGAGCG		GCTCTTTT	T	CTACCG3A	
1780	UGCGGUGA	CUGAUGAG	X	CGAA	AAAAAGAG		CTCTTTTT	C	TACCGGAA	
1782	UGUUCGCG	CUGAUGAG	X	CGAA	AGAAAAAG		CTTTTTCT	A	CGG3AA3A	

1795	UUGCUCCA	CUGAUGAG	X	CGAA	ACACUCUU		AA3AGTGT	C	T3GAGCAA	
1806	UGCUUJGC	CUGAUGAG	X	CGAA	ACUU3TUC		GA3CAA3T	T	3CAAA3CA	
1816	CUGAUJCC	CUGAUGAG	X	CGAA	AUGCUJUG		CAAA3CAT	T	33AAT3AG	
1820	UGCUJUCU	CUGAUGAG	X	CGAA	AUUC3AAU		ATTG3AAT	C	A3ACAG3A	
1833	CCCUUJUC	CUGAUGAG	X	CGAA	AGU3CUJU		ACAG3CACT	T	3AAGAG3G	
1840	CU3CUJUC	CUGAUGAG	X	CGAA	ACAG3CUC		G3AG3CT3T	C	33AAG3AG	
1873	UGCU33CU	CUGAUGAG	X	CGAA	ACCU3UG3		GCAGAG3T	C	AG33AG3A	
1883	33CUJCC3	CUGAUGAG	X	CGAA	AUG3TUG3		33CA3CAT	C	333AAG3C	
1911	33A3UCUG	CUGAUGAG	X	CGAA	AC3UCAG3		3CT3AC3T	C	CAGACT3C	
1913	AUGAA3C3	CUGAUGAG	X	CGAA	AGU3UG3A		TCCAGACT	C	CGCTTCAT	
1923	UG333AUG	CUGAUGAG	X	CGAA	AG333AG3		ACT3C3CT	T	CAT3CC3A	
1924	UJ3333AU	CUGAUGAG	X	CGAA	AA3333AG		CTC3C3TT	C	ATC3CCAA	
1937	33CUJ333	CUGAUGAG	X	CGAA	AUGAA333		CGCTTCAT	C	CCCAAG3C	
1954	AUGJU3AC	CUGAUGAG	X	CGAA	AUC333C3		CG3C3CAT	T	3T3AACAT	
1968	CCAC3AC3	CUGAUGAG	X	CGAA	AGUC3AUG		CAT3GACT	A	3T3CT3G	
1972	3TUC3AC	CUGAUGAG	X	CGAA	AC3UA3UC		GACTAC3T	C	3T333AG3	
1989	CU3C3333	CUGAUGAG	X	CGAA	AC3UUC3G		CA3AAC3T	T	CC3CAGAG	
1990	UCUCUC3C	CUGAUGAG	X	CGAA	AA3CUUCU		A3AAC3TT	C	CGCAG33A	
2015	33AG3UGA	CUGAUGAG	X	CGAA	AC3CUC33		CGAGC3CT	C	TCACCT3G	
2027	CU33AG3U	CUGAUGAG	X	CGAA	AGAC3CUC		GAG3CTCT	C	ACCT3CAG	
2028	UCAC3CUC	CUGAUGAG	X	CGAA	AG3UG33A		TCTCACCT	C	3AG3CT3A	
2040	GCAC3CUG	CUGAUGAG	X	CGAA	ACA3UG3C		G3CAC3CT	T	CAG3CT3C	
2041	AGCAC3CU	CUGAUGAG	X	CGAA	ACA3UG3C		GCCT3CTT	C	AG3CT3CT	
2050	UC3UA3JU	CUGAUGAG	X	CGAA	AG3AC3CU		AG3CT3CT	C	AACTAC3A	
2055	CC3CUC3C	CUGAUGAG	X	CGAA	AG3UG33C		GCTCAACT	A	CGAG3C3G	
2060	G33C3CAG	CUGAUGAG	X	CGAA	AG3C3C33		CC3C3CCT	C	CT3C3C3C	
2061	CCAG3ACA	CUGAUGAG	X	CGAA	AG3C3C3C		G33C3CCT	C	T3T3CT3G	
2111	CC3UG3GA	CUGAUGAG	X	CGAA	AUC3UG3A		TG3AC3AT	A	TCCAC3G	
2113	G3CCUC3G	CUGAUGAG	X	CGAA	AUAUC3UC		GAC3ATAT	C	CACAG33C	
2133	3CAG3CAC	CUGAUGAG	X	CGAA	AG3UC3C3		G3C3ACCT	T	3CT3CT3C	
2134	33CAG3AC	CUGAUGAG	X	CGAA	AA3GU3C3		CGCACCTT	C	GT3CT3CG	
2175	UGACAAAG	CUGAUGAG	X	CGAA	ACA3CUC3		T3AG3CT3	A	CTTTGT3A	
2178	CCUJGACA	CUGAUGAG	X	CGAA	AG3U3AC3		GCT3TACT	T	T3TCAAG3	
2179	ACCUJGAC	CUGAUGAG	X	CGAA	AA3U3AC3		CT3TACTT	T	GTCAA3GT	
2232	UC3ACCUJ	CUGAUGAG	X	CGAA	ACAAAG3A		TACTTTGT	C	AA3GT3GA	
2233	UG3UG3UG	CUGAUGAG	X	CGAA	AC333C3C		G33C3CCT	A	CGACAC3A	
2215	UCUJ333G	CUGAUGAG	X	CGAA	AUG3UG3C		GACACCAT	C	CCCAAG3A	
2230	ACCUCCGU	CUGAUGAG	X	CGAA	AG3CUG3C		GACAG3CT	C	AC3GA3GT	
2239	CU33C3GAU	CUGAUGAG	X	CGAA	ACCUCCGU		AC3GAG3T	C	ATC3CCA3	
2241	AUG3UG3C	CUGAUGAG	X	CGAA	AUGACCU3		GAG3TCAT	C	GCCAGCAT	
2251	G3UJUGAU	CUGAUGAG	X	CGAA	AUGCUG3C		GCCA3CAT	C	ATCAAA3C	
2254	UG333UJU	CUGAUGAG	X	CGAA	AUGAUG3U		AGCATCAT	C	AAACCC3A	
2271	3CAC3CAG	CUGAUGAG	X	CGAA	AC3U3UUC		GAACAC3T	A	CT3CGT3C	
2282	G3CAUAC3	CUGAUGAG	X	CGAA	AC3CA3C3		G3CT3CCT	C	G3TAT3CC	
2286	CCAC3G3A	CUGAUGAG	X	CGAA	AC3CA3C3		G3CT3CCT	A	T3CCGT3G	
2296	3CUUCUG	CUGAUGAG	X	CGAA	AC3AC3GC		GCCGT3GT	C	CAGAA33C	
2320	3CUUG3CG	CUGAUGAG	X	CGAA	AC3UG3CC		G33CACGT	C	CGCAA33C	

2331	G3CUCUU3	U3AU3AG	X	CGAA	AGGCUUU3		CAAGGCCT	T	CAAGAGCC	
2332	UG3CUUUJ	U3AU3AG	X	CGAA	AAG3CCUU		AAGGCTTT	C	AAGA3C3A	
2344	AA3GUAGA	U3AU3AG	X	CGAA	AD3U33CU		A3CCAG3T	C	T3TAOCTT	
2346	U3AAG3UA	U3AU3AG	X	CGAA	A3A33U33		CCAG3TCT	C	TACCTTGA	
2348	U3UCAAG3	U3AU3AG	X	CGAA	A3AGAC3U		AC3TCTCT	A	CTTTGACA	
2352	G3U3U3UJ	U3AU3AG	X	CGAA	A33UA3A3		CTCTACCT	T	3ACAGACC	
2362	UAC33CTJ3	U3AU3AG	X	CGAA	A33U3U3U		ACAGACCT	C	3AG333TA	
2370	GU3GCAU3	U3AU3AG	X	CGAA	A333U333		CCAG333T	A	3AG333AC	
2382	GA3CCAC3	U3AU3AG	X	CGAA	AC3U3U3C		3C3ACAGT	T	3T333CTC	
2383	U3AG3CAC	U3AU3AG	X	CGAA	AA3U3U3C		CGACAGTT	C	3T333CTCA	
2390	CU3CAG3U	U3AU3AG	X	CGAA	A3CCAC3A		TC3T33CT	C	ACCT33AG	
2425	U33AU3AG	U3AU3AG	X	CGAA	A333CAUC		GAT3C33T	C	3T3AT3GA	
2428	U3CU3GAU	U3AU3AG	X	CGAA	A33AC33C		GCC3T33T	C	AT3GA3CA	
2431	CU3UG3UJ	U3AU3AG	X	CGAA	AUGAC3AC		GT3TCTAT	C	3AGCAGAG	
2442	UCAG3GAG	U3AU3AG	X	CGAA	AGCU3U3C		GCAGAGCT	C	CTCCCTGA	
2445	CAUJ3CAG	U3AU3AG	X	CGAA	A33AG3UC		GAGCT3CT	C	CC33AAG3	
2470	AC3U3GAA	U3AU3AG	X	CGAA	A33CCACU		AGT333CT	C	TT3GA33T	
2472	A3AC3U3C	U3AU3AG	X	CGAA	A3AG33CA		T33CCTCT	T	CGAC3TCT	
2473	AA3AD3UJ	U3AU3AG	X	CGAA	AA3A33CC		G3CCTCTT	C	3AC3TCTT	
2479	CGUA33AA	U3AU3AG	X	CGAA	AC3U33AA		TT3GA33T	C	TTCCCTAG	
2491	A3CG3A33	U3AU3AG	X	CGAA	AGAC3U3C		CGAC3TCT	T	CCTA33CT	
2492	AA3CG3A3	U3AU3AG	X	CGAA	AA3AC3UJ		GAGCTCTT	C	CTAC3CTT	
2485	AU3AA3C3	U3AU3AG	X	CGAA	A3GAA3AC		GTCTTCTT	A	33CTTCTAT	
2490	G3CACAU3	U3AU3AG	X	CGAA	AGCGUA33		CCTAC3CT	T	CAT3TGCC	
2491	U33CACAU	U3AU3AG	X	CGAA	AA3CGUA3		CTAC3CTT	C	AT3TGCCA	
2515	UU3CC3CU	U3AU3AG	X	CGAA	AUG33CAC		GT3CGCAT	C	A3333CAA	
2526	G3AC3UA3	U3AU3AG	X	CGAA	AC3U33CC		GG3CAAGT	C	CTAC3TCC	
2529	ACU33AC3	U3AU3AG	X	CGAA	A33ACUJ3		CAA3TCTT	A	33TCCAGT	
2533	U33CACU3	U3AU3AG	X	CGAA	AC3UAG3A		TCCTAC3T	C	CA3T33CA	
2548	CC3U3C33	U3AU3AG	X	CGAA	AU3CCCTJ3		CA3333AT	C	CG3CAGGG	
2559	A3AG3AU3	U3AU3AG	X	CGAA	A3CCCU3C		GCAG33CT	C	CATCCTCT	
2563	GU3GA3AG	U3AU3AG	X	CGAA	AU33AG3C		GGCTCCAT	C	CTCTCCAC	
2566	A3CGU33A	U3AU3AG	X	CGAA	A33AU33A		TCCATCCT	C	TCCAC3CT	
2568	GCAG33U3	U3AU3AG	X	CGAA	AGA33AU3		CATCCTCT	C	CAC3CT3C	
2578	A33CU3CA	U3AU3AG	X	CGAA	AGCAG3CU		AC3CT3CT	C	T3CA33CT	
2572	U3U33C33	U3AU3AG	X	CGAA	A3CACAG3		CC3GT3CT	A	CG3CGACA	
2616	UCC333CA	U3AU3AG	X	CGAA	ACAGCTU3		CAAGCTGT	T	T3CG33GA	
2617	AU3CC33C	U3AU3AG	X	CGAA	AA3AG3UJ		AA3CT3TT	T	3CG333AT	
2626	UCC333C3	U3AU3AG	X	CGAA	AUCC33CC		3CG333AT	T	CG3CG3GA	
2627	GU3CC33C	U3AU3AG	X	CGAA	AAUCC33C		CG3333AT	C	CG3CG3AC	
2644	AAA33CA3	U3AU3AG	X	CGAA	AGCAG3CC		GG3CT3CT	C	CT33CTTT	
2651	AU3CACCA	U3AU3AG	X	CGAA	AC3CAG3A		TCTT33CT	T	T33T33AT	
2652	CAUCCAC3	U3AU3AG	X	CGAA	AA3CGAG3		CTT3CGTT	T	G3T33GAT	
2663	CAACAAGA	U3AU3AG	X	CGAA	AU3AU3CA		T33ATGAT	T	TCTTGTG	
2664	CCAA3AAG	U3AU3AG	X	CGAA	AAUCAUCC		CGATGATT	T	CTT3TTGG	
2665	ACCA3TAA	U3AU3AG	X	CGAA	AAAUCAUC		GATGATTT	C	TTGT33GT	
2667	UCACCAAC	U3AU3AG	X	CGAA	AGAAAUCA		TGATTTCT	T	GTT33TGA	

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Table III

2677	GUUUCACG	CUGAUGAG	X	CGAA	ACAAGAAA		TTTCTTGT	T	GGTACAC	
2681	GGUGAGGU	CUGAUGAG	X	CGAA	AGUGUCA		TGACACCT	C	ACTCACG	
2686	GGUUGGUU	CUGAUGAG	X	CGAA	AGUGAGG		CTTCACCT	C	AGCCACG	
2703	UCCUAGG	CUGAUGAG	X	CGAA	AGGUUUU		GAAGACCT	T	CTCACGA	
2704	GUCCUGAG	CUGAUGAG	X	CGAA	AAGGUUU		AAAACCTT	C	CTCAGAC	
2707	AGGGUCCU	CUGAUGAG	X	CGAA	AGGAAGGU		ACCTTCCT	C	AGGACCT	
2719	ACAUCUGG	CUGAUGAG	X	CGAA	ACGAGGGU		ACCTTGCT	C	CGAGGTGT	
2723	UACUACGG	CUGAUGAG	X	CGAA	ACACUUGG		CGAGGTGT	C	CTGAGTA	
2735	CGCAGCCA	CUGAUGAG	X	CGAA	ACUCAGGG		CCCTGAGT	A	TGGCTGG	
2754	UCUUGCGG	CUGAUGAG	X	CGAA	AGUUGAGG		GGTGAAGT	T	GCGGAGGA	
2775	CUACAGGG	CUGAUGAG	X	CGAA	AGUUGAGG		GGTGAAGT	T	CTGTAGG	
2776	UCUACAGG	CUGAUGAG	X	CGAA	AAUUGAGG		GTGAAGTT	C	CTGTAGGA	
2782	UCGUUGGU	CUGAUGAG	X	CGAA	ACAGGGAA		TTCCCTGT	A	GAAGAGGA	
2810	CUGAACAA	CUGAUGAG	X	CGAA	AGCCGGGG		GCACGGCT	T	TTGTGAG	
2811	UCUGAACG	CUGAUGAG	X	CGAA	AAAGCGGG		CAAGGGCT	T	TGTTCAGA	
2812	AUUGAGAG	CUGAUGAG	X	CGAA	AAAGCGGG		AGGGCTTT	T	GTTCAGAT	
2814	GGCAUCUG	CUGAUGAG	X	CGAA	ACAAAAAG		GCTTTTGT	T	CAGATGG	
2816	CGCCAUUU	CUGAUGAG	X	CGAA	AAACAAAA		CTTTTGTT	C	AGATGGG	
2836	CAAGGGAA	CUGAUGAG	X	CGAA	AGCCGGGG		CAGGGCTT	A	TTCCCTTG	
2838	ACCAAGGG	CUGAUGAG	X	CGAA	AUAGGGGG		GGGGCTAT	T	CGCTGTGT	
2839	CACCAAGG	CUGAUGAG	X	CGAA	AUAGGGGG		GGGGCTAT	C	CGCTGTGT	
2864	GGUCCGGG	CUGAUGAG	X	CGAA	AUCCAGGA		TGCTGGAT	A	CCCGAGCC	
2892	AGCUAGGA	CUGAUGAG	X	CGAA	AGUCCGUG		GAAGGAGT	A	CTCCAGCT	
2894	CAUAGGUG	CUGAUGAG	X	CGAA	AGUAGGUG		CGAGTACT	C	CAAGTATG	
2901	UCGCGGCA	CUGAUGAG	X	CGAA	AGCUGGAG		CTCCAGCT	A	TGCGCGGA	
2913	CUUUGAUU	CUGAUGAG	X	CGAA	AGGUCCGG		CGGAGCCT	C	CATCAGAG	
2917	CUGGCUUU	CUGAUGAG	X	CGAA	AUGGAGGU		ACCTCCAT	C	AGAGCCAG	
2927	GAAGGUUA	CUGAUGAG	X	CGAA	ACUGGCUU		GAGGCCAT	C	TCAGCTTC	
2929	UUGAAAGU	CUGAUGAG	X	CGAA	AGATUGGG		GCCAGTCT	C	AGCTTCAA	
2934	CGCGGUUG	CUGAUGAG	X	CGAA	AGGUGAGA		CTCACCTT	T	CAACCGGG	
2935	CGCGGUUU	CUGAUGAG	X	CGAA	AGGUGAGG		CTCACCTT	C	AAACCGGG	
2946	CAGGCUUG	CUGAUGAG	X	CGAA	AGCGCGGG		CGCGGGCT	T	CAAGGCTG	
2947	CCAGCCUU	CUGAUGAG	X	CGAA	AAAGCGGG		CGCGGGCT	C	AAAGGCTG	
2969	GAGUUUGG	CUGAUGAG	X	CGAA	ACGCAUGU		ACATGGGT	C	GCAAACTC	
2977	ACCCCAAA	CUGAUGAG	X	CGAA	AGUUGGGG		CGCAAACT	C	TTTGGGGT	
2979	AGACCCCA	CUGAUGAG	X	CGAA	AGAGUUUG		CAAACTCT	T	TGGGGTCT	
2980	AAGACCTC	CUGAUGAG	X	CGAA	AGAGUUUU		AAACCTCT	T	GGGGTCTT	
2986	AGCCGCAA	CUGAUGAG	X	CGAA	ACCCCAAA		TTTGGGGT	C	TTGGGGCT	
2988	UCAGCGGG	CUGAUGAG	X	CGAA	AGACCCCA		TGGGGTCT	T	GGGGCTGA	
3000	CAGGCUUG	CUGAUGAG	X	CGAA	ACACUUUA		TGAAGTGT	C	ACAGCCTG	
3012	AAUCCAGA	CUGAUGAG	X	CGAA	ACAGGCGG		CAGCCTGT	T	TCTGGATT	
3013	AAAUCGAG	CUGAUGAG	X	CGAA	AAACAGGC		AGCCTGTT	T	CTGGATTG	
3014	CAAAUCCA	CUGAUGAG	X	CGAA	AAACAGGC		GCTCTTTT	C	TGATTTTG	
3020	CACCUCCA	CUGAUGAG	X	CGAA	AUCCAGAA		TTCTGGAT	T	TGAGGTG	
3021	UCACCGGC	CUGAUGAG	X	CGAA	AAUCCAGA		TCTGGATT	T	GCAGGTGA	
3037	ACCGUCUG	CUGAUGAG	X	CGAA	AGGCGUUU		AACAGCCT	C	CAAGCGGT	
3058	AUCUUGUA	CUGAUGAG	X	CGAA	AGUUGGUU		ACCAACAT	C	TACAAGAT	

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Table III

3060	G3AUCUUG	CU3AU3AG	X	CGAA	AGAUGUUG		CAACATCT	A	CAAGATCC	
3067	A3CAGGAG	CU3AU3AG	X	CGAA	AUCUUGUA		TACAAGAT	C	CTCCTGGT	
3070	U3CAAGAG	CU3AU3AG	X	CGAA	AGGAUCUUG		AAGATCCT	C	CTGCTGGA	
3084	GAAACUUG	CU3AU3AG	X	CGAA	ACGCTUGG		GCAGGCGT	A	CAAGTTTC	
3090	AUGCGUGA	CU3AU3AG	X	CGAA	ACGUGUAC		GTACAAGT	T	TCAAGCAT	
3091	CAUGCGUG	CU3AU3AG	X	CGAA	AACUGUGA		TACAGGTT	T	CACGATG	
3092	ACAUGCGU	CU3AU3AG	X	CGAA	AAAUGUGU		ACAGGTTT	C	ACGATGCT	
3112	U3AAAUUG	CU3AU3AG	X	CGAA	AGGUGGAG		CTGAGGCT	C	CTATTTCA	
3117	GCUGAUGA	CU3AU3AG	X	CGAA	AUGGAGAG		GCTGCGAT	T	TGATGAGC	
3118	UGGUGAUG	CU3AU3AG	X	CGAA	AAUGGAGG		CTGCGATT	T	CATGAGCA	
3119	UGGUGAUG	CU3AU3AG	X	CGAA	AAAUGGAG		TGCGATTT	C	ATGAGCAA	
3122	AACUGGUG	CU3AU3AG	X	CGAA	AUGAAAGG		CATTTGAT	C	AGGAGGTT	
3130	UUGUGGGA	CU3AU3AG	X	CGAA	AGUGGUGG		CAGGAGGT	T	TGGAAGAA	
3131	GUUGUGGC	CU3AU3AG	X	CGAA	AACUGGUG		AGGAGGTT	T	GGAGGAAC	
3147	GCAAGGAA	CU3AU3AG	X	CGAA	AUGUGGAG		CGCGAGAT	T	TTGCTGCG	
3148	CGCAGGAA	CU3AU3AG	X	CGAA	AAUGUGGAG		CGCGATT	T	TTGCTGCG	
3149	GCGCAGGA	CU3AU3AG	X	CGAA	AAUGUGGAG		CGCGATT	T	TGCTGCGG	
3150	CGCGCAGG	CU3AU3AG	X	CGAA	AAAUUGGAG		CACATTTT	T	CTGCGCGG	
3151	ACGCGCAG	CU3AU3AG	X	CGAA	AAAAUGGAG		ACATTTTT	C	CTGCGCGT	
3160	UGCAGGAG	CU3AU3AG	X	CGAA	ACGCGCAG		CTGCGGCT	C	ATGCTGGA	
3163	GUGUGAGA	CU3AU3AG	X	CGAA	AUGAGGCG		CGCGTCAT	C	TGCGACAC	
3165	CGGUGUGA	CU3AU3AG	X	CGAA	AGAUGAGG		CGTCATCT	C	TGACAGCG	
3177	A3CAGGAG	CU3AU3AG	X	CGAA	AGGCGGUG		CAGGCGCT	C	CTGCTGCT	
3181	GAGUAGGA	CU3AU3AG	X	CGAA	AGGAGGCG		GCTGCGCT	C	TGCTAGTC	
3186	G3AUGGAG	CU3AU3AG	X	CGAA	AGCAGGAG		GCTGCTGCT	A	CTGCTGCT	
3189	UGCAGGAG	CU3AU3AG	X	CGAA	AGUAGGAG		CTGCTAGT	C	CATGCTGA	
3193	GCUUGGAG	CU3AU3AG	X	CGAA	AUGGAGUA		TACTGCTAT	C	CTGAAAGC	
3219	CGCGCAGC	CU3AU3AG	X	CGAA	ACAUGGCG		AGGAGTGT	C	GCTGCGCG	
3248	G3AAGGGA	CU3AU3AG	X	CGAA	AGGCGCGG		CGGCGGCT	C	TGCGGCTC	
3255	CGGCGUGG	CU3AU3AG	X	CGAA	AGGCGAGA		TGCGGCTC	C	CGAGGCGG	
3288	UGAGCAGG	CU3AU3AG	X	CGAA	AUGGUGGAG		CGAAGCAT	T	CTGCTGGA	
3289	UGAGCAGG	CU3AU3AG	X	CGAA	AUGGUGGAG		CGAAGCAT	C	CTGCTGGA	
3295	GUCAGGUG	CU3AU3AG	X	CGAA	AGCAGGAA		TTGCTGCT	C	AAGCTGAC	
3305	ACGCGUGG	CU3AU3AG	X	CGAA	AGUAGGCG		AGCTGACT	C	GACAGGCT	
3316	ACGUGAGG	CU3AU3AG	X	CGAA	ACAUGGUG		CAGGCTGT	C	AGCTAGCT	
3321	GUGGCAAG	CU3AU3AG	X	CGAA	AGGUGAGA		TGTCAGCT	A	CGTGGCAC	
3331	GAGGCGAG	CU3AU3AG	X	CGAA	AGGUGGAG		GTGCGACT	C	CTGCGGTC	
3339	UGGUGAGG	CU3AU3AG	X	CGAA	ACCGCAGG		CTGCGGCT	C	ACTGAGGA	
3345	GUGGUGGUG	CU3AU3AG	X	CGAA	AGGAGGCG		GCGTCACT	C	AGGAGAGC	
3368	GAGGUGGUG	CU3AU3AG	X	CGAA	ACGUGGCG		AGCTGAGT	C	GGAGGCTC	
3376	GUGGCGCG	CU3AU3AG	X	CGAA	AGGUGGCG		CGGAGGCT	C	CGGCGGAG	
3429	UGAAGGUG	CU3AU3AG	X	CGAA	AGGCGAGU		ACTGCGCT	C	AGGCTTCA	
3435	UGGUGGUG	CU3AU3AG	X	CGAA	AGGUGGAG		CTGAGACT	T	CAAGAGCA	
3456	AUGGUGUG	CU3AU3AG	X	CGAA	AGGUGGGA		TGAGACTT	C	AAAGAGCAT	
3445	CAGGCGAG	CU3AU3AG	X	CGAA	AUGGUGGUG		AAAGAGCAT	C	CTGAGACTG	
3503	CGCGGCGU	CU3AU3AG	X	CGAA	ACAAGGCG		AGGCTGCT	C	ACGCGCGG	
3514	GCGAGGUA	CU3AU3AG	X	CGAA	AGGCGGCG		GCGCGGCT	C	TACGCTCC	

3516	CUG3GACG	CUG3AUGAG	X	CGAA	AGAGCCCG		CGGGCTCT	A	CGTCCAG	
3520	CUCGCGUG	CUG3AUGAG	X	CGAA	AGGUAAG		CTCTACGT	C	CCAGGGAG	
3568	AGGCGUCA	CUG3AUGAG	X	CGAA	ACUCCAG		CTGGGAGT	C	TGAGGCT	
3587	CUCGGGCA	CUG3AUGAG	X	CGAA	ACAUCAC		GTGAGTGT	T	TGGGCGAG	
3588	CCUCCGCG	CUG3AUGAG	X	CGAA	AACACUCA		TGAGTGT	T	GGGCGAGG	
3606	UUUAGCGG	CUG3AUGAG	X	CGAA	ACAUGGAG		CTGATGT	C	CGGCTGAA	
3625	CUCAGCGG	CUG3AUGAG	X	CGAA	ACAUCAG		CTGAGTGT	C	CGGCTGAG	
3648	UUUUGGUG	CUG3AUGAG	X	CGAA	ACAUCGCG		GGGAGTGT	C	CAGCGAAG	
3667	GUUGGUG	CUG3AUGAG	X	CGAA	ACAUCAG		CTGAGTGT	C	CAGGACAC	
3683	GAAUGGAA	CUG3AUGAG	X	CGAA	AGGCGAGG		CTGCGGT	C	TTCAGTTC	
3685	GGGAAUGG	CUG3AUGAG	X	CGAA	AGAGCGCA		TGCGGT	T	CACTTCCG	
3686	GGGAAAGU	CUG3AUGAG	X	CGAA	AGAGCGCG		GGGCTGT	C	ACTTCCCG	
3690	UUUUGGUG	CUG3AUGAG	X	CGAA	AGGAAAG		TCTTCACT	T	CCCGACAG	
3691	CCUUGGUG	CUG3AUGAG	X	CGAA	AGGAAAG		CTTCACTT	C	CCGACAGG	
3708	GUUGGCGG	CUG3AUGAG	X	CGAA	AGGCGGAG		CTGCGGT	C	GGGCGGAG	
3713	CUGGCGUG	CUG3AUGAG	X	CGAA	AGGCGGAG		GTGCGGT	C	CACCGGAG	
3730	GUUGGAA	CUG3AUGAG	X	CGAA	AGGCGGCG		GGGCGGT	T	TGCGGAG	
3731	GUUGGAA	CUG3AUGAG	X	CGAA	AGGCGGCG		GGGCGGT	T	TGCGGAG	
3732	UGGUGGAG	CUG3AUGAG	X	CGAA	AGGCGGCG		CCGCGTTT	T	CTCGGAG	
3733	CUGGUGAG	CUG3AUGAG	X	CGAA	AGGCGGCG		CAGCGTTT	C	CTCGGAG	
3736	CUCUGGUG	CUG3AUGAG	X	CGAA	AGGAGGAG		CTTTGCT	C	AGGAGGAG	
3752	GGGAGUGG	CUG3AUGAG	X	CGAA	AGGCGGCG		GGGCGGT	T	CCGCTGCG	
3753	GGGAGUGG	CUG3AUGAG	X	CGAA	AGGCGGCG		GGGCGGT	C	CACTGCGG	
3758	UAUGGUGG	CUG3AUGAG	X	CGAA	AGGCGGAG		CTTCCACT	C	CCGACATA	
3766	ACUAGUGG	CUG3AUGAG	X	CGAA	AGGUGGCG		CCCGACAT	A	GGAATAGT	
3772	GGAGGAGC	CUG3AUGAG	X	CGAA	AUGGUGAG		ATAGGAAAT	A	GTGATGCG	
3775	UGGGGAGG	CUG3AUGAG	X	CGAA	ACUAGUGG		GGAATAGT	C	CATCGGCA	
3779	AAUGGUGG	CUG3AUGAG	X	CGAA	AUGGAGUA		TAGTCCAT	C	CCGAGATT	
3787	CAAGGUGG	CUG3AUGAG	X	CGAA	AUGGUGG		CCCGAGAT	T	CGGATTG	
3788	ACAAUGGCG	CUG3AUGAG	X	CGAA	AAUGGUGG		CCCGAGAT	C	GGGATTGT	
3794	GGGUGAAC	CUG3AUGAG	X	CGAA	AUGGCGAA		TGCGGAT	T	GTTCAGCG	
3797	GAGGCGUG	CUG3AUGAG	X	CGAA	ACAAUGGCG		GGGATTGT	T	CAGCGGCG	
3798	CGAGGCGU	CUG3AUGAG	X	CGAA	AAAGAGGCG		CGATTGT	C	AGGCGGCG	
3805	GGGAGGCG	CUG3AUGAG	X	CGAA	AGGCGGUGA		TGCGGCT	C	GGGCGGCG	
3816	AGGCAAGG	CUG3AUGAG	X	CGAA	AGGCGAGG		CTGCGCT	C	CTTTGCGT	
3819	GGAAAGCA	CUG3AUGAG	X	CGAA	AGGAGGCG		GGGCTCT	T	TGCGGTGCG	
3820	UGGAAAGCG	CUG3AUGAG	X	CGAA	AAAGGAGG		GGGCTCT	T	GGGTTGCA	
3825	GGGCGGUG	CUG3AUGAG	X	CGAA	AGGCAAGG		CTTTGCGT	T	CCAGCGCG	
3826	UGGCGGUG	CUG3AUGAG	X	CGAA	AAAGGAGG		TTTGGCT	C	CAGCGGCA	
3839	UCCAGGUG	CUG3AUGAG	X	CGAA	AUGGUGG		CCCGACAT	C	CAGGTTGGA	
3873	AAUJCGCA	CUG3AUGAG	X	CGAA	AGGCGGCA		TGCGGCT	C	TGGGAAAT	
3881	UCACUGCA	CUG3AUGAG	X	CGAA	AUGGCGAG		CTGGGAAAT	T	TGGAGTGA	
3887	GUACUGCG	CUG3AUGAG	X	CGAA	AAUJCGCA		TGCGGAAAT	T	GGAATGAC	
3907	CGGCGUGG	CUG3AUGAG	X	CGAA	ACAAGGCA		TGCGGCT	A	CAGAGGCG	
3940	CCGACAGG	CUG3AUGAG	X	CGAA	ACCGGCAU		ATGGGCGT	C	CGGCTGGG	
3950	CCGAAUUG	CUG3AUGAG	X	CGAA	ACCGGAGG		CTTGGGT	C	AAATGGG	
3955	CUCGCGCG	CUG3AUGAG	X	CGAA	AUUGGAGC		GGTCAAT	T	GGGCGAGG	

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Table III

3977	CAGUAAUU CUGAUGAG X CGAA ACUCCAC	GTGGAGT A AAATACTG
3982	AUAUUCAG CUGAUGAG X CGAA AUUUUACU	AGTAAAT A CTGAATAT
3989	AACUCAUA CUGAUGAG X CGAA AUUCAGUA	TACTAAT A TATGAGTT
3991	AAAACUCA CUGAUGAG X CGAA AUAUUCAG	CTGAATAT A TGAGTTTT
3997	AACUGAAA CUGAUGAG X CGAA ACUCAUAU	ATATAGT T TTTCAGTT
3998	AAACUGAA CUGAUGAG X CGAA AACUCAUA	TATGAGTT T TTCAGTTT
3999	AAAACUGA CUGAUGAG X CGAA AAACUCAU	ATGAGTTT T TCAGTTTT
4000	CAAAACUG CUGAUGAG X CGAA AAAACUCA	TGAGTTTT T CAGTTTTG
4001	UCAAAAUC CUGAUGAG X CGAA AAAAACUC	GAGTTTTT C AGTTTTGA
4005	UUUUUCAA CUGAUGAG X CGAA ACUGAAAA	TTTTAGT T TTGAAAAA
4006	UUUUUUCA CUGAUGAG X CGAA AACUGAAA	TTTCAGTT T TGAAAAAA
4007	UUUUUUUC CUGAUGAG X CGAA AACUGAAA	TTCAGTTT T GAAAAAAA

Stem Length = 8 . Core Sequence = CUGAUGAG X CGAA (X = GCCGUUAGGC or other stem II sequence and length (greater than or equal to 2 base-pairs))
Seq1 = TERT (Homo sapiens telomerase reverse transcriptase (TERT) mRNA, 4015 bp); Nakamura *et al.*, Science 277 (5328), 955-959 (1997)

Table IV: Human telomerase reverse transcriptase (TERT) NCH Ribozyme and Target Sequence

nt. Position	Ribozyme Sequence	Seq ID Nos	Substrate Sequence	Seq ID Nos
14	33GCA3CA CUGAUGAG X C3AA IAGCA3C		GCT3C3TC C TGCTG3GC	
15	U333CA3C CUGAUGAG X C3AA IGAC33A3		CTG333TC T GCTG33CA	
18	AGGU333C CUGAUGAG X C3AA ICA33A33		33T333TC T G33CA33T	
23	U333CA3C CUGAUGAG X C3AA ICA33A3A		T33T333C A G3T333AA	
34	33333CA3 CUGAUGAG X C3AA ICA333CA		T333AA3C C CT33333C	
35	333333CA CUGAUGAG X C3AA ICA3333C		333AA33C C TG33333C	
36	3333333C CUGAUGAG X C3AA ICA33333C		33AA333C T G333333C	
40	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
41	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
42	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
46	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
47	33333333 CUGAUGAG X C3AA ICA33333C		3333333C A C333333C	
49	AU333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
50	CAU33333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
51	3CAU3333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
52	33CAU333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
60	3AG33333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
67	CA333333 CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
69	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
70	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
71	U3333CA3C CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
74	33333333 CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
77	CA333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
87	3AG33333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
89	CA333333 CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
91	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
92	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
93	U3333CA3C CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
96	33333333 CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
101	33333333 CUGAUGAG X C3AA ICA33333C		3333333C A C333333C	
104	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
105	33333333 CUGAUGAG X C3AA ICA33333C		3333333C A C333333C	
107	U3333CA3C CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
110	CA333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
120	33333333 CUGAUGAG X C3AA ICA33333C		3333333C T C333333C	
123	U3333CA3C CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
126	AGGU3333 CUGAUGAG X C3AA ICA33333C		3333333C T G333333C	
130	AGGAA333 CUGAUGAG X C3AA ICA33333C		3333333C C AG33333C	
131	CA333333 CUGAUGAG X C3AA ICA33333C		3333333C A C333333C	
146	33333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
147	33333333 CUGAUGAG X C3AA ICA33333C		3333333C T G333333C	
153	AG333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	
154	CA333333 CUGAUGAG X C3AA ICA33333C		3333333C C C333333C	

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Table IV

155	CCAGCCCU	CU3AUGAG	X	CGAA	IG3CCCA		TG3GGCCC	C	AG3CTG3	
156	GCACGCCC	CU3AUGAG	X	CGAA	IG3CCCCC		GG3GCCCC	A	GG3CT3GC	
161	CA3CCGCG	CU3AUGAG	X	CGAA	IGCCCGCG		CCCA333T	T	GGCGCT3	
163	GCUCGACG	CU3AUGAG	X	CGAA	IGCCCGAG		CTGGCGCG	T	GG3CA3G	
174	CCCGCGCG	CU3AUGAG	X	CGAA	ICACCGAG		GGTGGTGC	A	GGCG333	
184	AGCCCGCG	CU3AUGAG	X	CGAA	IUCCCCGC		GGGGG3AC	C	GGCG33GT	
184	AA3CCGCG	CU3AUGAG	X	CGAA	IGUCCCCG		GGGGG3AC	C	GGCG33TT	
193	CCCGCGAA	CU3AUGAG	X	CGAA	IGCCCGCG		CCGGCGCG	T	TTCCCGCG	
197	CA3CCGCG	CU3AUGAG	X	CGAA	IAAGCGCG		GGGTCTTC	C	GGCG33TG	
204	GGCCCGCG	CU3AUGAG	X	CGAA	IGCCCGCG		CCCGCGCG	T	GGTGGCG	
211	AG3CAUUG	CU3AUGAG	X	CGAA	ICCA3CA3		CTGGTGGC	C	CA3TGGCT	
212	CA3CGACU	CU3AUGAG	X	CGAA	IGCCCA3CA		TGGTGGCG	C	AGTGGCTG	
213	CCAG3CAC	CU3AUGAG	X	CGAA	IGCCCGAC		GGTGGCGC	A	GTGGCTGG	
214	GCACACCA	CU3AUGAG	X	CGAA	ICACUGGG		CCCA3TGC	C	TGGTGGCT	
219	CCCA3CAC	CU3AUGAG	X	CGAA	IGCA3UGG		CCCA3TGC	T	GGTGGTGG	
231	CGUC3CA3	CU3AUGAG	X	CGAA	ICAC3CA3		GTGGCTGG	C	CTGGGA3G	
232	GGUC3CCA	CU3AUGAG	X	CGAA	IGCA3CGCA		TGGCTGGC	C	TGGGA3GG	
233	UG3CGUCG	CU3AUGAG	X	CGAA	IG3CGACG		GGGTGGCG	T	GGGA3CGCA	
241	GGCG3CGC	CU3AUGAG	X	CGAA	IG3CGCCA		TGGGA3GC	A	CG3CGCGC	
246	CGCG3GGC	CU3AUGAG	X	CGAA	IGCG3CGC		CGCA3CGC	C	GGCGCGCG	
249	CGCG3GGG	CU3AUGAG	X	CGAA	IGCG3CGU		AGGGCGCG	C	CGCGCGCG	
250	GGCG3GGG	CU3AUGAG	X	CGAA	IGCG3CGC		GGCGCGCG	C	CGCGCGCG	
251	GGCG3GGG	CU3AUGAG	X	CGAA	IGCG3CGC		GGCGCGCG	C	CGCGCGCG	
252	GGCG3GGG	CU3AUGAG	X	CGAA	IGCG3CGC		GGCGCGCG	C	CGCGCGCG	
253	GGCG3GGG	CU3AUGAG	X	CGAA	IGCG3CGG		CGCGCGCG	C	GGCGCGCG	
254	GA3GGGGG	CU3AUGAG	X	CGAA	IGCG3GGG		CGCGCGCG	C	GGCGCGCT	
259	AA3GA3GG	CU3AUGAG	X	CGAA	IGCG3GGG		CGCGCGCG	C	CGCTCGCT	
260	GAAG3A3G	CU3AUGAG	X	CGAA	IGCG3GGG		CGCGCGCG	C	CGCTCGCT	
261	GAAG3A3G	CU3AUGAG	X	CGAA	IGCG3GGG		CGCGCGCG	C	CGCTCGCT	
262	CG3AA3GA	CU3AUGAG	X	CGAA	IGGG3GGC		GGCGCGCG	C	TGCTTGGG	
263	GG3GA3GG	CU3AUGAG	X	CGAA	IGGG3GGG		CGCGCGCG	T	CGTTGGGG	
265	UG3CG3AA	CU3AUGAG	X	CGAA	IA3GG3GG		GGCGCGCT	C	TTGGCGCA	
266	CU3CG3GA	CU3AUGAG	X	CGAA	IGA3GG3G		CGCGCTCG	T	TGG3CGAG	
269	CA3CG3GC	CU3AUGAG	X	CGAA	IAAG3A3G		CGCTCGCT	C	GGCA3GTG	
271	GGACACCU	CU3AUGAG	X	CGAA	IG3GA3GG		CGTTGGCG	C	AG3GTGGC	
273	AG3ACACG	CU3AUGAG	X	CGAA	IG3GG3AA		CTTGGCGC	A	GGGTGGCT	
280	GU3AG3CA	CU3AUGAG	X	CGAA	IA3AC3UG		CA3GTGGC	C	TGGCT3AA	
281	GU3AG3GC	CU3AUGAG	X	CGAA	IG3AC3CU		AG3GTGGC	T	GGGT3AAG	
284	GU3CG3CA	CU3AUGAG	X	CGAA	IG3AG3ACA		TGTGGTGC	C	TGAAG3AG	
285	GCUC3UGC	CU3AUGAG	X	CGAA	IG3AG3AC		GTGGTGGC	T	GAA3GA3C	
294	GG3CCACG	CU3AUGAG	X	CGAA	IGUC3UGC		GAA3GA3C	T	GGTGGCGC	
301	AG3CA3UG	CU3AUGAG	X	CGAA	IGCA3CGAG		CTGGTGGC	C	GA3GTGGT	
307	CA3CACUG	CU3AUGAG	X	CGAA	IGCCAC3CA		TGGTGGCG	C	GA3GTGGT	
309	GCUC3UGC	CU3AUGAG	X	CGAA	IGCA3UGG		CGAGTGGC	T	GCA3AG3C	
317	AG3CGUCG	CU3AUGAG	X	CGAA	IGAG3ACU		AGTGGTGC	A	GA3GTGGT	
318	GU3CG3AC	CU3AUGAG	X	CGAA	IGUC3UGC		GCA3AG3C	T	GTGGAG3C	
345	CGAAG3GC	CU3AUGAG	X	CGAA	IGAC3GUU		GAA3GTGC	T	GG3CTTGG	

349	AAGDCAAA	CUGAUGAG	X	CGAA	ICCCAGCAC		GTGCTGCG	C	TTCCGCTTT	
350	GAAAGCCAA	CUGAUGAG	X	CGAA	ICCCAGCAA		TGCTGCGC	T	TCGGCTTC	
356	CAGDCCAA	CUGAUGAG	X	CGAA	ICCCAGAG		CTTTCGCG	T	TCGCGCTG	
362	CGTCCAA	CUGAUGAG	X	CGAA	ICCCAGAG		CTTTCGCG	T	CGTCCAG	
366	CCDCCG	CUGAUGAG	X	CGAA	ICAGCCCG		DGCGCTGC	T	CGACCGCG	
370	CCDCCCG	CUGAUGAG	X	CGAA	ICDCCCG		GACCGCG	C	CGCGCGCG	
374	CCDCCCG	CUGAUGAG	X	CGAA	ICDCCCG		ACCGCGCG	C	CGCGCGCG	
380	CTDCCCG	CUGAUGAG	X	CGAA	ICDCCCG		CGCGCGCG	C	CCDCCAG	
384	CTDCCCG	CUGAUGAG	X	CGAA	ICDCCCG		CGCGCGCG	C	CCDCCAG	
388	CTDCCCG	CUGAUGAG	X	CGAA	ICDCCCG		CGCGCGCG	C	CCDCCAG	
389	CGDCCCG	CUGAUGAG	X	CGAA	ICCGCCCG		CGCGCGCG	C	CGCGCGCG	
390	AGDCCCG	CUGAUGAG	X	CGAA	ICCGCCCG		CGCGCGCG	C	CGCGCGCG	
391	AAAGCCCG	CUGAUGAG	X	CGAA	ICCGCCCG		CGCGCGCG	C	CGCGCGCG	
397	CGCGCGAA	CUGAUGAG	X	CGAA	ICCGCGCG		CGCGCGCG	C	TTCCCGCG	
398	CGCGCGAA	CUGAUGAG	X	CGAA	ICCGCGCG		CGCGCGCG	T	TTCCCGCG	
401	CGCGCGCG	CUGAUGAG	X	CGAA	IAAGCGCG		AGCGCGCG	A	CGCGCGCG	
403	AGCGCGCG	CUGAUGAG	X	CGAA	IUGAGCG		CGCGCGCG	C	AGCGCGCG	
404	CAAGCGCG	CUGAUGAG	X	CGAA	ICUGAGCG		CTTTCAGC	A	CGCGCGCG	
406	CGCAAGCG	CUGAUGAG	X	CGAA	IUGAGCG		TTCCCGCG	C	AGCGCGCG	
407	CGCGCAAG	CUGAUGAG	X	CGAA	ICUGCGCG		TCAGCGCG	A	CGCGCGCG	
416	CAGCGAGC	CUGAUGAG	X	CGAA	ICCGCAAG		CGCGCGCG	A	CGCGCGCG	
419	CGCGCAAG	CUGAUGAG	X	CGAA	ICUGCGCG		TGCGCGCG	T	AGCGCGCG	
422	CGCGCGCA	CUGAUGAG	X	CGAA	IUGAGCG		CGCGCGCG	C	TGCGCGCG	
423	CGCGCGCG	CUGAUGAG	X	CGAA	ICUGAGCG		CGCGCGCG	T	CGCGCGCG	
426	CGCGCGCG	CUGAUGAG	X	CGAA	ICAGCGAG		CTAGCGCG	C	CAAGCGCG	
427	AGCGCGCG	CUGAUGAG	X	CGAA	ICCGCGAG		TAGCGCG	C	AAGCGCG	
428	CAAGCGCG	CUGAUGAG	X	CGAA	ICCGCGAG		AGCGCGCG	A	AGCGCGCG	
431	CGCGCAAG	CUGAUGAG	X	CGAA	IUGCGCG		TGCGCGCG	A	CGCGCGCG	
439	AGCGCGCG	CUGAUGAG	X	CGAA	IUGAGCG		AGCGCGCG	C	CGCGCGCG	
445	CGCGCGCG	CUGAUGAG	X	CGAA	ICCGCGCG		AGCGCGCG	A	CGCGCGCG	
447	CGCGCGCG	CUGAUGAG	X	CGAA	IUGCGCG		CGCGCGCG	T	CGCGCGCG	
471	CGCGCAAG	CUGAUGAG	X	CGAA	ICCGCGCG		GTGCGCG	T	CGCGCGCG	
474	CGCGCAAG	CUGAUGAG	X	CGAA	ICAGCGCG		CGCGCGCG	T	CGCGCGCG	
477	CGCGCGCG	CUGAUGAG	X	CGAA	ICAGCGCG		CGCGCGCG	T	CGCGCGCG	
482	CGCGCAAG	CUGAUGAG	X	CGAA	ICCGCAAG		TGCGCGCG	C	CGCGCGCG	
501	CGCGCAAG	CUGAUGAG	X	CGAA	ICAGCGCG		CGCGCGCG	T	CGCGCGCG	
502	CGCGCAAG	CUGAUGAG	X	CGAA	IAAGCGCG		CGCGCGCG	A	CGCGCGCG	
509	CGCGCAAG	CUGAUGAG	X	CGAA	IUGAGCG		TGCGCGCG	C	TGCGCGCG	
510	CGCGCAAG	CUGAUGAG	X	CGAA	ICUGAGCG		CGCGCGCG	T	CGCGCGCG	
513	AGCGCGCG	CUGAUGAG	X	CGAA	ICAGCGCG		TCAGCGCG	T	CGCGCGCG	
517	CGCGCAAG	CUGAUGAG	X	CGAA	ICAGCGCG		CTGCGCG	A	CGCGCGCG	
521	AGCGCGCG	CUGAUGAG	X	CGAA	ICUGCGCG		TGCGCGCG	T	CGCGCGCG	
526	CGCGCAAG	CUGAUGAG	X	CGAA	ICCGCGCG		CTGCGCG	T	CTTTCGCG	
530	CGCGCAAG	CUGAUGAG	X	CGAA	IAAGCGCG		CGCGCGCG	T	TTTTCGCG	
532	AGCGCAAG	CUGAUGAG	X	CGAA	ICAGCAAG		CTTTCGCG	T	CGCGCGCG	
544	CGCGCGCG	CUGAUGAG	X	CGAA	ICAGCGCG		CTGCGCG	T	CGCGCGCG	
546	CGCGCGCG	CUGAUGAG	X	CGAA	IAAGCGCG		GGTGGCG	C	CGCGCGCG	

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547	GCGCAGCU	CUGAUGAG	X	CGAA	IAGGCCAC		GTG3CTCC	C	AGCTGCGC	
548	G3CGCA3C	CUGAUGAG	X	CGAA	I33A3CCA		TGGGTCDC	A	3CT3C3CC	
551	3UA33C3C	CUGAUGAG	X	CGAA	I0UG3BA3		CTC3CA3C	T	3C3C3TAC	
556	A3CU33UA	CUGAUGAG	X	CGAA	I33CA3CU		AGCTGCGC	C	TACCA3GT	
557	CA3CU33U	CUGAUGAG	X	CGAA	I3CG3CAGC		3CT3C3CC	T	ACCAG3TG	
560	3CACACCU	CUGAUGAG	X	CGAA	I3AG3C3C		3C3C3TAC	C	AG3TG3GC	
561	33CACACU	CUGAUGAG	X	CGAA	I3UA33C3		CGC3TACU	A	3GT3T3C3	
573	ACA33C3C	CUGAUGAG	X	CGAA	I3C3C3AC		GT33333C	C	3C3C3CTG	
576	33UA33C3	CUGAUGAG	X	CGAA	I333C3C3		3333C3C3	C	3CT3TACU	
579	3CU333UA	CUGAUGAG	X	CGAA	I333C33C		3C33C3C3	T	GTACCA3C	
584	3C33A3CU	CUGAUGAG	X	CGAA	I3UA33C3		33CT3TAC	C	AG3T33C3	
585	33C33A3C	CUGAUGAG	X	CGAA	I3UA33C3		3CT3TACU	A	3CT333C3	
588	CA3C3C3C	CUGAUGAG	X	CGAA	I0UG3UA3		3TAC3A3C	T	033C3CTG	
595	33A3U33C	CUGAUGAG	X	CGAA	I3C3C3A3		CT333C3C	T	3C3ACTCA	
598	3C3U3A3U	CUGAUGAG	X	CGAA	I3A3C3C3		33C3CT3C	C	ACTCA33C	
599	33C3U3AG	CUGAUGAG	X	CGAA	I3CA3C3C		3C3CT3C3	A	CTCA33C3	
601	3333C3UG	CUGAUGAG	X	CGAA	IUG3CA3C		3CT3C3AC	T	CA33C3C3	
603	3C3333C3	CUGAUGAG	X	CGAA	IAG3U33CA		T3C3ACTC	A	33C3C3C3	
607	3333C3C3	CUGAUGAG	X	CGAA	I3CU3A3U		ACTCA33C	C	33C3C3C3	
608	333333C3	CUGAUGAG	X	CGAA	I3C3U3A3		CTCA33C3	C	33C3C3C3	
612	3UG3C333	CUGAUGAG	X	CGAA	I3C333C3		GGC3C3C3	C	3C3C3C3C	
613	UG33C333	CUGAUGAG	X	CGAA	I3C3333C		3C3C33C3	C	3C3C3ACA	
614	3UG333C3	CUGAUGAG	X	CGAA	I33C3333		3C333C3C	C	33C3C3C3	
615	33U333C3	CUGAUGAG	X	CGAA	I333C3C3		3C333C3C	C	33C3C3C3	
618	3A3C333U	CUGAUGAG	X	CGAA	I3C3333C		3C3C3C3C	C	AC3C3CTA	
619	CUA3C3UG	CUGAUGAG	X	CGAA	I3C33333		3C3C3C3C	A	CAC33TA3	
621	CACUAG3C	CUGAUGAG	X	CGAA	IUG3C333		3C33C3AC	A	3C3TA3TG	
623	33U3CA3U	CUGAUGAG	X	CGAA	I3CU3333		3CACAC3C	T	AGT33AC3	
633	3C3U3C33	CUGAUGAG	X	CGAA	IUG3CA3UA		TAGT33AC	C	333AA33C	
634	3C3C3U33	CUGAUGAG	X	CGAA	I3U3CA3U		AGT33AC3	C	333AA33C	
635	A3C3C3U3	CUGAUGAG	X	CGAA	I33U3CA3		GT33AC3C	C	3AA33C3T	
645	33CA3C3C	CUGAUGAG	X	CGAA	IAC3C3U3		AAG3C3T3	T	333AT3C3	
661	UG3U3C3A	CUGAUGAG	X	CGAA	I3C33U3C		GAAC333C	C	T33AA3CA	
662	AUG33U3C	CUGAUGAG	X	CGAA	I3C3C3U3		AA3333C3	T	333AA3CAT	
668	3AC3C3AU	CUGAUGAG	X	CGAA	IUG3CA33		3CT33AAC	C	ATA3C3TC	
669	33AC3CUA	CUGAUGAG	X	CGAA	I3U3CA33		CT33AAC3	A	TAG3C3TA	
677	33C3U3C3	CUGAUGAG	X	CGAA	IAC3CUAU		ATA3C3TC	A	333AA33C	
685	333A3C3C	CUGAUGAG	X	CGAA	I3C3C3C3		A333AG3C	C	3333T3C3	
690	3C3CA333	CUGAUGAG	X	CGAA	IAC3C3C3		3C3333TC	C	3CT333C3	
693	33C3CA33	CUGAUGAG	X	CGAA	I3AC3C3C		33333TC3	C	3CT333C3	
694	A33C3C3A	CUGAUGAG	X	CGAA	I33AC3C3		3333TC3C	C	CT333C3T	
695	CA33C3CA	CUGAUGAG	X	CGAA	I333A3C3		333TC3C3	C	T333C3TC	
696	3CA33C3C	CUGAUGAG	X	CGAA	I3333A3C		33TC3C3C	T	333C3TC3	
701	33U333CA	CUGAUGAG	X	CGAA	I3C3CA33		3CCT333C	C	T33CA3C3	
702	333CU33C	CUGAUGAG	X	CGAA	I3C3CA33		3CT333C3	T	3C3A3C3C	
705	3C3333CU	CUGAUGAG	X	CGAA	I3AG3C3C		333C3TC3	C	A3C3C333	
706	3C33333C	CUGAUGAG	X	CGAA	I3CAG33C		33C3TG3C	A	3C3C3333	

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709	GCACCCGG	CUGAUGAG	X	C3AA	ICUG33AG		CTGCCAGC	C	CC333T3C	
710	CGCACCCG	CUGAUGAG	X	C3AA	IGCU33CA		FGCCAGCC	C	C333TGCG	
711	UC3CAACC	CUGAUGAG	X	C3AA	IG3CU33C		3C3A3CCC	C	333P333A	
734	3CU33CAC	CUGAUGAG	X	C3AA	I33CC33C		3C3333GC	A	3T3CCA3C	
739	CUJC33CU	CUGAUGAG	X	C3AA	I3CAU33C		33CA3T3C	C	AG3C3AA3	
740	ACJU333C	CUGAUGAG	X	C3AA	I3CAU33C		3CA3T3CC	A	3C33AA3T	
743	CA3A3UJC	CUGAUGAG	X	C3AA	ICUG33CA		3T3C3A3C	C	GAA3TCT3	
750	3CAAC33C	CUGAUGAG	X	C3AA	IACUJC33		C3AA3T3C	T	3C33T33C	
753	U333CAAC	CUGAUGAG	X	C3AA	I3CA3CUJ		AA3TCT3C	C	3TT3CCCA	
759	3CCU3UJG	CUGAUGAG	X	C3AA	I3AA333C		3CC3TT3C	C	CAA3A33C	
760	33CCU3CU	CUGAUGAG	X	C3AA	I3CAAG33		C33TT3CC	C	AA3A33CC	
761	333CCU3U	CUGAUGAG	X	C3AA	I333CA33		C3TT3CCC	A	AGA33CCC	
768	CA33CCU3	CUGAUGAG	X	C3AA	I3CU3UJ3		CAAGAG3C	C	CA33C3T3	
769	CCAC3CCU	CUGAUGAG	X	C3AA	I3CCU3CU		AA3A33CC	C	AG3C3T33	
770	3CCA33CC	CUGAUGAG	X	C3AA	I33CCU3U		AGA333CC	A	33C3T33C	
781	U3A3333C	CUGAUGAG	X	C3AA	I333CA33		C3T333CC	T	3C333T3A	
784	33CU3A33	CUGAUGAG	X	C3AA	I3CA33CC		33C3T3CC	C	CCT3A3CC	
785	C33CU3A3	CUGAUGAG	X	C3AA	I3CA33CC		33C3T3CC	C	CT3A3CC3	
786	CC33CU3A	CUGAUGAG	X	C3AA	I333CA33		C3CT33CC	C	T3AG3CC3	
787	UCC33CU3	CUGAUGAG	X	C3AA	I333CA3C		3CT33CCC	T	GAG3CC3A	
792	UCC33CU3C	CUGAUGAG	X	C3AA	I3CU3A33		CCT3A3CC	C	3GA3CC3A	
804	3CCCAAC3	CUGAUGAG	X	C3AA	I3CU3CC3C		3CC3AC3C	C	C3TT333C	
805	U3CCCAAC	CUGAUGAG	X	C3AA	I3CU3CC3		C33A33CC	C	3TT333CA	
813	A33ACCCC	CUGAUGAG	X	C3AA	I3CCAA33		C3TT333C	A	3333T3CT	
820	U333CCCA	CUGAUGAG	X	C3AA	IACCCU33		CAG333TC	C	TG333CCA	
821	3U333CC3	CUGAUGAG	X	C3AA	IGA3CCCU		AG333TCC	T	333CC3AC	
826	CC3333U3	CUGAUGAG	X	C3AA	I3CCAG3A		TCC333CC	C	CA3CC333	
827	3CC3333U	CUGAUGAG	X	C3AA	I3CCAG33		CCT333CC	C	ACC3333C	
828	U3CC3333	CUGAUGAG	X	C3AA	I3CCCA33		CT3333CC	A	CC3333CA	
830	CCUGCCCG	CUGAUGAG	X	C3AA	IUG333CC		333CC3AC	C	3333CA33	
831	UCCUGCC3	CUGAUGAG	X	C3AA	IUG333CC		33CC3ACC	C	333CA33A	
836	AC3CC3U3C	CUGAUGAG	X	C3AA	I3CC333U		A3CC333C	A	33AC3CC3T	
849	33UCACU3	CUGAUGAG	X	C3AA	IUCAC33C		3C3T33AC	C	3A3T3A3C	
857	GAACCCAC	CUGAUGAG	X	C3AA	IUCACU33		C3AGT3AC	C	3T33TTTC	
866	CA3CACAC	CUGAUGAG	X	C3AA	IAAAC3AC		3T33TTTC	T	3T3T33T3	
877	CU33CA33	CUGAUGAG	X	C3AA	IACAC3AC		3T33T3TC	A	CCT3CCAG	
879	GU3U33CA	CUGAUGAG	X	C3AA	IUGAC3CC		33T3T3AC	C	T3CCAGAC	
880	33U3U33C	CUGAUGAG	X	C3AA	I3UGACAC		3T3T3ACC	T	3CCAG3CC	
883	3C333U3U	CUGAUGAG	X	C3AA	I3CA333A		TCA3CT3C	C	AGA3CC3C	
884	33C333U3	CUGAUGAG	X	C3AA	I3CA333U		CAC3T3CC	A	3A3CC3CC	
888	CUJC33CG	CUGAUGAG	X	C3AA	IUCU33CA		T3CCAGAC	C	C3CC3AA3	
889	U3UJC33C	CUGAUGAG	X	C3AA	I3UCU33C		3CCAG3CC	C	3CC3AA3A	
892	3CUJC3U3C	CUGAUGAG	X	C3AA	I3C333U3U		AGACCC3C	C	GAA3AA3C	
901	AAA3AG3U	CUGAUGAG	X	C3AA	I3UJC3U3C		GAA3AA3C	C	ACCTCTTT	
902	CAAAGAG3	CUGAUGAG	X	C3AA	I3CU3U3U		AAGAG3CC	A	CCTCTTT3	
904	UCCAAA3A	CUGAUGAG	X	C3AA	IUG3CU3C		GAA33CA3	C	TCTTT33A	
905	CUCCAAAG	CUGAUGAG	X	C3AA	IUG3CU3U		AAG33ACC	T	CTTTG3AG	

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907	CCUCCAA	CU3AUGA3	X	CGAA	IAG3U33C		3CCA3CTC	T	TTG3AG33	
921	U3CCAGAG	CU3AUGA3	X	CGAA	ICGCA3CC		33GT33CG	T	CTCTG3CA	
923	CCU3CCAG	CU3AUGA3	X	CGAA	IAG33CA3		3T3CG3TC	T	CT33CA33	
925	CC3CU3CC	CU3AUGA3	X	CGAA	IAGA333C		3CG3CTCT	T	GGCA3333	
929	GU33C3CC	CU3AUGA3	X	CGAA	ICCA3A3A		TCTCT33C	A	CG333CA3	
935	GU33GA3U	CU3AUGA3	X	CGAA	IC333U3C		3CA3333C	C	ACT33CA3	
936	33U333AG	CU3AUGA3	X	CGAA	IG3333U3		CA33333C	A	CTC33A3C	
938	U333U333	CU3AUGA3	X	CGAA	IUG33333		CG333CA3	T	CCCA33CA	
940	GAU333U3	CU3AUGA3	X	CGAA	IAGU3333		CG3CA3TC	C	CA333CATC	
941	33AU333U	CU3AUGA3	X	CGAA	IAGA3U33C		3CCA3TCC	C	AC33CATCC	
942	CC3AU333	CU3AUGA3	X	CGAA	IGGA3U33		CCA3TCC3	A	CCCAT333	
944	CA333AU3	CU3AUGA3	X	CGAA	IUG333AU		ACT33CA3	C	CAT333TG	
945	CCA333AU	CU3AUGA3	X	CGAA	IGU333AG		CTC3CA3C	C	ATC33T33	
946	CCCA333A	CU3AUGA3	X	CGAA	IGGU333A		TCCCA3CC	A	TCC3T333	
949	CG3CC3AC	CU3AUGA3	X	CGAA	IAU333U3		CA333CATC	C	GT333333	
950	GU3CU33C	CU3AUGA3	X	CGAA	ICCCA333		CC3T333C	C	GCCAG3AC	
954	GU3GU3CU	CU3AUGA3	X	CGAA	IC3333CA		T333333C	C	AG3CA33C	
960	CCU33U3C	CU3AUGA3	X	CGAA	IG3333CC		3333333C	A	GCA33CA3	
963	CC3CGU33	CU3AUGA3	X	CGAA	ICU33333		CC33CA3C	A	CCA33333	
965	3CC333U	CU3AUGA3	X	CGAA	IUG3U33C		3CCA33AC	C	AC3CG33C	
966	33CC3333	CU3AUGA3	X	CGAA	IGUG3U33		CCA33CA3	A	CG33333C	
974	33AU3333	CU3AUGA3	X	CGAA	ICCC333U		AC33333C	C	CC3CATCC	
975	U33AU333	CU3AUGA3	X	CGAA	IGCC3333		CG33333C	C	CCCAT3CA	
976	3U33AU33	CU3AUGA3	X	CGAA	IG33CC33		3CG3333C	C	CCAT33CA	
977	U3U33AUG	CU3AUGA3	X	CGAA	IG33CC33		CG33333C	C	CAT33CA3A	
978	AU3U33AU	CU3AUGA3	X	CGAA	IG3333CC		3333333C	C	AT33CAT	
979	GAU3U33A	CU3AUGA3	X	CGAA	IG33333C		3333333C	A	T33CATC	
982	CC33AU3U	CU3AUGA3	X	CGAA	IAU33333		CC333CATC	C	ACAT3333	
983	CC333AU3	CU3AUGA3	X	CGAA	IGAUG333		CC333CATC	A	CAT33333	
985	33CC333A	CU3AUGA3	X	CGAA	IUG3AU33		CCAT33AC	A	T333333C	
993	GA3GU33U	CU3AUGA3	X	CGAA	ICCC33AU		AT33333C	C	ACCA33TC	
994	33AC3U33	CU3AUGA3	X	CGAA	IGCC333A		T333333C	A	CCA33TCC	
996	A333A33U	CU3AUGA3	X	CGAA	IUG3CC3C		333333AC	C	AG3T33CT	
997	CA333A33	CU3AUGA3	X	CGAA	IGU33333		CG333CA3C	A	CGT33CT3	
1002	UGUCC3AG	CU3AUGA3	X	CGAA	IAC3U33U		ACCAC3TC	C	CT333ACA	
1003	GU3UCCCA	CU3AUGA3	X	CGAA	IGA3U333		CCA33TCC	C	T333ACAC	
1004	CCU3UCC3	CU3AUGA3	X	CGAA	IGGA33U3		CA33TCC3	T	333ACA33	
1010	ACAA33CC	CU3AUGA3	X	CGAA	IUCCCA33		CCT333AC	A	333CTT3T	
1014	3333ACAA	CU3AUGA3	X	CGAA	IC3UGUCC		33ACA33C	C	TT3TCC3C	
1015	33333ACA	CU3AUGA3	X	CGAA	IG33U33C		3ACA333C	T	T3T3333C	
1020	ACAC3333	CU3AUGA3	X	CGAA	IACAA33C		33CTT3TC	C	CC33T33T	
1021	UACAC333	CU3AUGA3	X	CGAA	IGA3AA33		CCTT3TCC	C	CC33TGTA	
1022	3UACAC3C	CU3AUGA3	X	CGAA	IG3ACAA3		CTT3TCC3	C	CG3T3TAC	
1023	CGUACAC3	CU3AUGA3	X	CGAA	IG33ACAA		TTGT333C	C	GGT3TAC3	
1033	U333U3UC	CU3AUGA3	X	CGAA	IC3UA3AC		3TGTAC3C	C	GAGA3CAA	
1039	AAGU333U	CU3AUGA3	X	CGAA	IU3UC33C		3333AGAC	C	AAG3ACTT	
1040	3AA3U3CU	CU3AUGA3	X	CGAA	IGU3U333		CG3A3ACC	A	AGCACTTC	

1044	A3A3GAA3	CU3AU3AG	X	CGAA	I CUUG3UC		3ACCAAGC	A	CTTCTCTT	
1046	GUA3A3GA	CU3AU3AG	X	CGAA	IUGCUJUG		CCAAGCAC	T	TCTCTTAC	
1049	G3A3UAGA	CU3AU3AG	X	CGAA	IAA3U3CU		AGCACTTC	C	TCTACTCC	
1050	A3GAGUA3	CU3AU3AG	X	CGAA	IGAAG3UC		GCACTTCC	T	CTACTCTT	
1052	U3A3GAGU	CU3AU3AG	X	CGAA	IGAAG3UJ		ACTTCTTC	T	ACTCTTCA	
1055	GCCU3AG3	CU3AU3AG	X	CGAA	IUA3AG3A		TCTCTTAC	T	CCTCA3CC	
1057	UCCCU3GA	CU3AU3AG	X	CGAA	IA3UAGAG		CTTACTTC	C	TCA3CC3A	
1058	GUC3C3UG	CU3AU3AG	X	CGAA	IGA3UAGA		TCTACTTC	T	CAG3CCAC	
1060	UJ3UC3CC	CU3AU3AG	X	CGAA	IGA3A3UA		TACTCTTC	A	GGC3ACAA	
1062	CU3CU3CU	CU3AU3AG	X	CGAA	IUC3CU3G		CAG3CCAC	A	AGGAG3AG	
1074	GCC3CAGC	CU3AU3AG	X	CGAA	IUCU3UJG		CAAG3AGC	A	3CT3CC3C	
1077	A333C3CC	CU3AU3AG	X	CGAA	IUC3U3CC		33A3CAGC	T	3CC3CCCT	
1083	G3AA33AG	CU3AU3AG	X	CGAA	IGCC3C3C		GCT3CC3C	C	CTCCTTCC	
1084	A33AA33A	CU3AU3AG	X	CGAA	IGCC3C3C		CT3CC3CC	C	TCTCTCTT	
1085	UAG3AA3G	CU3AU3AG	X	CGAA	IG3CC3CA		T3CC3CC3	T	CCTTCTTA	
1087	A3UAG3AA	CU3AU3AG	X	CGAA	IGA33CC3		CC3CCCTC	C	TCTCTACT	
1088	GAG3JA3A	CU3AU3AG	X	CGAA	IGA333CC		33CCTCTC	T	TCTACTTC	
1091	GU3A33JA	CU3AU3AG	X	CGAA	IAA33A33		CTTCTTTC	C	TACTCAGC	
1092	A3CU3AGU	CU3AU3AG	X	CGAA	IGA333AG		CTCCTTTC	T	ACTCA3CT	
1095	GAGAG3U3	CU3AU3AG	X	CGAA	IUA33AAG		CTTCTTAC	T	CAGCTCTC	
1097	CAGAG33C	CU3AU3AG	X	CGAA	IGA3U33A		TCTACTTC	A	3CTCTCTG	
1100	CCUCA3AG	CU3AU3AG	X	CGAA	ICU3AG3A		TACTCAGC	T	CTCT3AGG	
1102	G3CCU3CA	CU3AU3AG	X	CGAA	IGA3CU3G		CTCA3CTC	T	CT3A33CC	
1104	U333C3U3	CU3AU3AG	X	CGAA	IGA3C3U3		CAGCTCTC	T	GA33CCCA	
1110	UCA33CUG	CU3AU3AG	X	CGAA	ICCU3C3A		TCTGA33C	C	CAGCCT3A	
1111	GUCA33CU	CU3AU3AG	X	CGAA	IGCCU3AG		CT3A33CC	C	AGCCT3AC	
1112	AGUCA33C	CU3AU3AG	X	CGAA	IGGCCU3A		T3AG33CC	A	GCCT3ACT	
1115	GCCAG3CA	CU3AU3AG	X	CGAA	ICUG33CC		33CCCA3C	C	T3ACT33C	
1116	CCCA33U3	CU3AU3AG	X	CGAA	IGCU333C		33CCCA3C	T	GACT33CG	
1120	CGA3CC3C	CU3AU3AG	X	CGAA	IUCA33CU		AGCCT3AC	T	GGCCTCTG	
1126	AGCCU3CC	CU3AU3AG	X	CGAA	IGCCU3AG		ACT33CC3	T	CGA33CTT	
1134	UCUC3CAG	CU3AU3AG	X	CGAA	ICCU3CC3A		T33A33C	T	CGT33A3A	
1144	A3AAA3AU	CU3AU3AG	X	CGAA	IUCUCCAC		3T33A3AC	C	ATCTTTCT	
1145	CA3AAA3A	CU3AU3AG	X	CGAA	IGUCUCCA		T33A3AC3	A	TCTTTCTG	
1148	ACCCA3AA	CU3AU3AG	X	CGAA	IAUG3UCU		A3ACCATC	T	TTCT33CT	
1152	UG3AA3CC	CU3AU3AG	X	CGAA	IAAA3AUG		CATCTTTT	T	333TTCCA	
1159	CA333CCU	CU3AU3AG	X	CGAA	IAACCCAG		CT333TTT	C	A33CCCTG	
1160	CCA333CC	CU3AU3AG	X	CGAA	IGAA3CCA		T333TTCC	A	33CCCT3G	
1164	GCAUCCAG	CU3AU3AG	X	CGAA	ICU333AA		TTCCAG3C	C	CT33AT3C	
1165	G3CAUCCA	CU3AU3AG	X	CGAA	IGCCU33A		TCCA3G3C	C	T33AT3CC	
1166	UG3CAUCC	CU3AU3AG	X	CGAA	IG3CCU3G		CCA33CC3	T	33AT3CCA	
1173	GAG3UCCU	CU3AU3AG	X	CGAA	ICAUCCAG		CT33AT3C	C	A333ACTC	
1174	G3AG3UCC	CU3AU3AG	X	CGAA	IGCAUCCA		T33ATG3C	A	333AT3CC	
1180	UGCC33GG	CU3AU3AG	X	CGAA	IUC3CU3G		CCA33GAC	T	CC3CC3AG	
1182	ACCU33CG	CU3AU3AG	X	CGAA	IA3UCCCU		AGG3ACTC	C	CC33A3CT	
1183	AACTUGCG	CU3AU3AG	X	CGAA	IGA3UC3C		33GACTCC	C	CGAG3TTT	
1184	CAACCU3C	CU3AU3AG	X	CGAA	IGAG3UCC		33ACTCC3	C	3CA3GTTG	

1187	GG3CAACC	CUGAUGAG	X	CGAA	I CGGGAG		CTCCCCGC	A	GGTGCCC	
1194	GCAG3CGG	CUGAUGAG	X	CGAA	I CAACCG		CA3GTTGC	C	CGGCTGC	
1195	GGCA33CG	CUGAUGAG	X	CGAA	I GCAACCG		A3GTTGC	C	CGGCTGC	
1196	GGGCA3CG	CUGAUGAG	X	CGAA	I GGCACCG		GGTTGCGC	C	GGGCTGC	
1199	CGGG33CA	CUGAUGAG	X	CGAA	I CGGG3CA		GGGGCGC	C	TGGGCA3	
1200	GGU333CG	CUGAUGAG	X	CGAA	I GGG33CG		GGGGCGC	T	GGGGCAGC	
1203	AG33CGCG	CUGAUGAG	X	CGAA	I CA33CG		CGGGCGC	C	CA33CGT	
1204	GA33CGCG	CUGAUGAG	X	CGAA	I GCA33CG		GGGTTGC	C	CAG33CTA	
1205	GA33CGCG	CUGAUGAG	X	CGAA	I GGCAC3CG		GGGTTGC	C	AG33CTAC	
1206	AGUA33CG	CUGAUGAG	X	CGAA	I GGGCA3CG		CGTGGCGC	A	GG3CTACT	
1211	UG33CGAG	CUGAUGAG	X	CGAA	I CG33CG		CGCA33CG	T	ACT33CAA	
1214	CAUUU3CG	CUGAUGAG	X	CGAA	I UAG33CG		A3GGCTAC	T	GGCAAAFG	
1218	GGGGCAJU	CUGAUGAG	X	CGAA	I CCA33JAG		CTACT3CG	A	AAT33CGC	
1227	GAACAC3G	CUGAUGAG	X	CGAA	I CG33CAJU		AAT33CGC	C	CG33TTTC	
1228	A3AAACA3	CUGAUGAG	X	CGAA	I GG33CAU		ATGG33CG	C	CT33TTCT	
1229	CAGAAACA	CUGAUGAG	X	CGAA	I GG33CGCA		TGG33CGC	C	T33TTCTG	
1230	CCAGAAAC	CUGAUGAG	X	CGAA	I GGG33CGC		GG33CGCG	T	GT33TTCTG	
1236	GCAGCGUC	CUGAUGAG	X	CGAA	I AAA33CG		CGT33TTTC	T	GA33CTGC	
1242	UCCCAAGC	CUGAUGAG	X	CGAA	I CUCCAGA		TCT33GAGC	T	CGT33G3A	
1245	GGUUCGCA	CUGAUGAG	X	CGAA	I CAG33UCG		GGAG33CG	T	TGG3AAAC	
1252	CGCGCGCG	CUGAUGAG	X	CGAA	I UUGCCAA		TTGG3AAAC	C	ACG33CAG	
1254	AGUG33CG	CUGAUGAG	X	CGAA	I GUUCCCA		TGG3AAAC	A	CG33CAGT	
1260	A333G3AC	CUGAUGAG	X	CGAA	I CG333UG		CCA33CGC	A	GTGGCCCT	
1265	CG33JAGG	CUGAUGAG	X	CGAA	I CAG33CG		CGCA33CG	C	CGTAC33G	
1266	CG33CGJAG	CUGAUGAG	X	CGAA	I G33AGUCG		CGCA33CG	C	CGTAC33G	
1267	AGCGCGUA	CUGAUGAG	X	CGAA	I G33CACUG		CA33CGCG	C	TAC33GGT	
1268	CA33CG3U	CUGAUGAG	X	CGAA	I G33CGAU		AGT33CGC	T	ACG33GTC	
1278	UUGUGAGG	CUGAUGAG	X	CGAA	I CAGCCCG		CG33GTC	T	CGTCAAG3A	
1280	CGUUG3A	CUGAUGAG	X	CGAA	I AG33CACCG		GG33GTC	C	TCAAG3AG	
1281	GGUUGUGG	CUGAUGAG	X	CGAA	I GAG33CAC		GGT33GTC	T	CAAG33CG	
1283	GU33GUCU	CUGAUGAG	X	CGAA	I AG33AGCA		TGCTCGTC	A	AGAG33CAC	
1290	GG3333AG	CUGAUGAG	X	CGAA	I CGUUGUG		CAAG33CG	A	CTGGCCCG	
1292	CAGCG33G	CUGAUGAG	X	CGAA	I UGCGUGU		AGA33CAC	T	GGCGCGTC	
1295	UG33CA3CG	CUGAUGAG	X	CGAA	I CAG33UGG		CGCACT3CG	C	CGCT33CGA	
1296	GU33CA3CG	CUGAUGAG	X	CGAA	I GCA33UGG		CGCACT3CG	C	CGCT33CGA	
1299	CA33CGCG	CUGAUGAG	X	CGAA	I CG333CA3		CTGGCCCG	T	GG33GCTG	
1306	GU33AGCG	CUGAUGAG	X	CGAA	I CG333CA3		CTGG33AG	T	GG33GCTA	
1313	UGUG33GG	CUGAUGAG	X	CGAA	I AG333CA3		CTGG33AG	A	CGCCAG3CA	
1315	GUUG33GG	CUGAUGAG	X	CGAA	I UGA33CGC		GG33GTC	C	CGAG33AGC	
1316	GGUG33GG	CUGAUGAG	X	CGAA	I GU33AGCG		GG33GTC	C	CAG33AGCG	
1317	GG33UGCG	CUGAUGAG	X	CGAA	I GGUG33CG		GG33GTC	C	AG333CGG	
1318	CG33UGCG	CUGAUGAG	X	CGAA	I GGUG33CG		GG33GTC	A	CGAG33CGG	
1321	ACAG33GG	CUGAUGAG	X	CGAA	I CGUG33GU		ACCG33AG	A	GGCG33GT	
1324	CA33AGCG	CUGAUGAG	X	CGAA	I CGUG33GU		CGAG33AG	C	GG33GTCG	
1331	CG3333CAC	CUGAUGAG	X	CGAA	I AG3333CGG		CGG33GTC	T	GTGGCCCGG	
1336	UUUGCCCG	CUGAUGAG	X	CGAA	I CAG33AGC		GTCTGTCG	C	CGG33AGAA	
1337	CUUGCCCG	CUGAUGAG	X	CGAA	I GCAC33AG		TCTGTCG	C	GG33AGAA	

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1347	AGCCUUGG	CUGAU3AG	X	CGAA	ICUUUUCU	GGAGAAGC	C	CCAGG3CT	
1348	GA3CUCUG	CUGAU3AG	X	CGAA	IGUUUUCU	GA3AA3CC	C	CAGG3CTC	
1349	A3A3CCCU	CUGAU3AG	X	CGAA	IG3CUUCU	A3AAGCCU	C	A333CTCT	
1350	GA3A3CCU	CUGAU3AG	X	CGAA	IG33CUUC	GA3CCUCC	A	G333CTCT	
1355	CC3CACA3	CUGAUGAG	X	CGAA	ICCUU333	CC3AG33C	T	CT3T3333	
1357	CC3CCUAC	CUGAUGAG	X	CGAA	IA3CCUUC	CA333CTC	T	GT33333C	
1365	UCUUU333	CUGAU3AG	X	CGAA	IC333CUC	GT33333C	C	CC33AG3A	
1367	CUCCU333	CUGAU3AG	X	CGAA	IG333CUC	UG33333C	C	CC3A33AG	
1368	CCUCCUUC	CUGAU3AG	X	CGAA	IG3CC3CC	G33333CC	C	CGA33AG3	
1369	UCUUUCUU	CUGAU3AG	X	CGAA	IG33333C	G33333CC	C	GA33AG3A	
1380	G333UUCU	CUGAU3AG	X	CGAA	IUUUUUCU	A3GA33AC	A	CA3A3CCU	
1384	CC3333UC	CUGAU3AG	X	CGAA	IUUUUUCU	GA33A3AC	A	GA3CC3CC	
1384	CC3A3333	CUGAU3AG	X	CGAA	IUUUU33U	ACA3A3AC	C	CC3CT33C	
1387	G333A333	CUGAU3AG	X	CGAA	IGUUU33U	CA3A3A3C	C	CC3T33CC	
1390	A33C3A3C	CUGAU3AG	X	CGAA	IGUUU33U	ACA3A3CC	C	CT3333CT	
1391	GA3333AC	CUGAU3AG	X	CGAA	IG33UUCU	CA3A3CCU	C	GT3333CT	
1397	CU3CA3CA	CUGAU3AG	X	CGAA	IC3A3333	CC3CT33C	C	T33T33AG	
1398	GU33CA3C	CUGAU3AG	X	CGAA	IG33A333	CC3T33CC	T	G3T3CA3C	
1404	GA3CA33C	CUGAU3AG	X	CGAA	IC3A3CA33	CT33T33C	A	GCT3CTCC	
1407	G3333A3C	CUGAU3AG	X	CGAA	ICU3CA3C	G3T3CA3C	T	GCT333CC	
1410	GU333333	CUGAU3AG	X	CGAA	IC3A3CU3C	GCA3CT3C	T	CC3CCAGC	
1412	GU3CU33C	CUGAU3AG	X	CGAA	IA3CA3CU	A3CT3CTC	C	GCCAGCAC	
1415	GU3GU3CU	CUGAU3AG	X	CGAA	IC33AGCA	T3CTCC3C	C	A3CA3A3C	
1416	UGUU3U3C	CUGAU3AG	X	CGAA	IG333A3C	GCTCC3CC	A	GCA3A3CA	
1419	G3CU3CU3	CUGAU3AG	X	CGAA	ICU33C33	CC3CCAGC	A	CA3CA3CC	
1421	G333CU3C	CUGAU3AG	X	CGAA	IU3CU33C	GCCAGCAC	A	GCA3CCCC	
1424	CCA3333C	CUGAU3AG	X	CGAA	ICU3GU3C	A3CA3A3C	A	GCCCT333	
1427	CU3CCAG3	CUGAU3AG	X	CGAA	ICU3GU3U	ACA3CA3C	C	CTT33CA3	
1428	CCU3CCAG	CUGAU3AG	X	CGAA	IGCU3CU3	CA3CA3CC	C	CT33CA33	
1429	ACCU3CCA	CUGAU3AG	X	CGAA	IG3CU3CU	A3CA3CCU	C	T33CA33T	
1430	CA3CU3CC	CUGAU3AG	X	CGAA	IG3CU3CU	GCA3CCCC	T	G3CA33T3	
1434	CGUACA3C	CUGAU3AG	X	CGAA	IC3A3333	CCCT333C	A	G3T3TACG	
1441	CC3CA3CA	CUGAU3AG	X	CGAA	IC33UA3A	T3TA333C	T	T3T33333	
1456	CC3A33CA	CUGAU3AG	X	CGAA	ICCC3CAC	GTG3333C	C	T3CT3333	
1457	CC3CA33C	CUGAU3AG	X	CGAA	IGCC33CA	T3C333CC	T	GCT3333C	
1460	CC33CCCA	CUGAU3AG	X	CGAA	ICAG3CCU	G33CT33C	C	T33CC333	
1461	CCCC333C	CUGAU3AG	X	CGAA	IGCA33CC	G3CT33CC	T	G33CC333	
1466	CA3CA3CC	CUGAU3AG	X	CGAA	IG3CA33C	GCT3333C	C	G3CT33T3	
1470	G333CA3C	CUGAU3AG	X	CGAA	IC333C3C	G33C333C	T	G3T3CCCC	
1476	G3CCU333	CUGAU3AG	X	CGAA	ICACCA3C	GCT33T3C	C	CC3AG3CC	
1477	AG3CCUGG	CUGAUGAG	X	CGAA	IGCA3CAG	CTG3T3CC	C	CCA333CT	
1478	GA33CCUG	CUGAUGAG	X	CGAA	IG3CA3CA	T3GT33CC	C	CAG33CTC	
1479	AGA33CCU	CUGAUGAG	X	CGAA	IG33CA3C	G3T3CCCC	C	AG33CTCT	
1480	CA3A33CC	CUGAUGAG	X	CGAA	IG333CAC	GT3CCCCC	A	G3CTCTCT	
1484	GC3CCAGA	CUGAUGAG	X	CGAA	ICUU3333	CCCA333C	C	TCT3333C	
1485	AG3CC3AG	CUGAUGAG	X	CGAA	IGCCUGGG	CCCA33CC	T	CT3333CT	
1487	GGAG3CCC	CUGAUGAG	X	CGAA	IA3GCCUG	CAGG3CTC	T	G33GCTCC	

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1493	3UGCCUGG	CUGAUGAG	X	CGAA	I DCCAGAG		TCTGGGBC	T	CCAGGCAC	
1495	GUUUGCCU	CUGAUGAG	X	CGAA	IA-3000CA		TGGGBCTC	C	A300CAAA	
1496	GUUUGCCU	CUGAUGAG	X	CGAA	IGA-3000		GGGBCTC	A	GGCA0AA0	
1500	GUUUGCCU	CUGAUGAG	X	CGAA	I DCC33AG		CTCCAGBC	A	CAAC0AAC	
1502	GUUUGCCU	CUGAUGAG	X	CGAA	I DCC00GG		CCAGGCAC	A	A00AA000	
1511	GA33AA3C	CUGAUGAG	X	CGAA	I DCCUUGU		ACGAAGBC	C	GGTTCCTC	
1514	GUUUGCCU	CUGAUGAG	X	CGAA	I DCC00GU		AA00000	T	TCTTCAGG	
1517	GUUUGCCU	CUGAUGAG	X	CGAA	IAA-3000		GGGBCTC	C	TCA33AA0	
1518	GUUUGCCU	CUGAUGAG	X	CGAA	IGA-3000		GGGBCTC	T	CA33AA0A	
1520	GUUUGCCU	CUGAUGAG	X	CGAA	IA33AA3C		GGTTCCTC	A	GGAA0A00	
1524	GUUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGA		TCA33AA0	A	CCAA33AA3	
1527	AAUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGU		AGGAACAC	C	AA33AA3TT	
1529	GAUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGU		GGAAACAC	A	AGAA3TTT	
1533	CA33AG3A	CUGAUGAG	X	CGAA	IAA0UUGU		AGAA3TTT	A	TCTTCCTG	
1541	CC00CA33	CUGAUGAG	X	CGAA	IAU3AA0U		AGTTTCAT	T	CCCTGGGG	
1543	GUUUGCCU	CUGAUGAG	X	CGAA	IA3AU3AA		TTCATCTC	C	CTGG33AA	
1544	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3A		TCTCTCTC	C	TGG33AA3	
1545	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3A		CATCTCTC	T	GG33AA3C	
1546	GUUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGU		GG33AA3C	A	TGCCAA3C	
1554	GA3AG0UJ	CUGAUGAG	X	CGAA	I DCCUUGU		AA0CAT3C	C	AA0CTCTC	
1556	GA3AG0UJ	CUGAUGAG	X	CGAA	IGA3AU3C		AGCAT3CC	A	AGCTCTCC	
1564	GA3AG0UJ	CUGAUGAG	X	CGAA	I DCCUUGU		TGCCAA3C	T	CT00CT3C	
1565	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3C		CCAA3CTC	T	CCCT3CA3	
1569	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3C		GGCTCTCC	T	GA33AG3C	
1571	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3C		CT00CT3C	A	GG33CT3A	
1575	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3C		GGAG3AGC	T	GA03T3GA	
1604	CCAA303C	CUGAUGAG	X	CGAA	I DCCUUGU		TGGG3AGC	T	GGCTTTGG	
1607	CCAA303C	CUGAUGAG	X	CGAA	I DCCUUGU		GACTGG3C	T	TGGCTTGG	
1614	GUUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGU		GGCTTTGG	T	GGCA33GA	
1615	GUUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3C		GGCTTTGG	A	GG3300CA	
1623	AA0000UJ	CUGAUGAG	X	CGAA	I DCCUUGU		GGAG3AGC	C	CA3333TT	
1626	CAA000UJ	CUGAUGAG	X	CGAA	IGA3AU3C		CA33AG0C	C	AG333TTT	
1627	CCAA303C	CUGAUGAG	X	CGAA	IGA3AU3C		AGAG300C	A	GG33TTGG	
1637	CCAA303C	CUGAUGAG	X	CGAA	I DCCUUGU		GGCTTTGG	T	GGTTCTCC	
1644	GUUUGCCU	CUGAUGAG	X	CGAA	IAA-3000		CTCTCTCT	C	GG333CA3	
1648	GUUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGU		GTCTCTCT	C	GCAG33CA	
1651	GUUUGCCU	CUGAUGAG	X	CGAA	I DCCUUGU		GGG333CC	A	GA33CA00	
1656	GA3AG0UJ	CUGAUGAG	X	CGAA	I DCCUUGU		GCAG3AGC	A	GGCTCTCT	
1658	AA3CA3AC	CUGAUGAG	X	CGAA	I DCCUUGU		CA3AG3AC	C	GTCTCTCT	
1660	GUUUGCCU	CUGAUGAG	X	CGAA	IA-3000		GCAG3AGC	T	GGCT3AGG	
1676	GUUUGCCU	CUGAUGAG	X	CGAA	IAUUGCCU		AGGA3ATC	C	TGG00AA3	
1677	AAUUGCCU	CUGAUGAG	X	CGAA	IGA3AU3C		GGAG3ATC	T	GG00AA3T	
1681	AGGA3ATC	CUGAUGAG	X	CGAA	I DCCUUGU		ATCTCTCT	C	AA3TTCTT	
1682	CA33AA3U	CUGAUGAG	X	CGAA	IGA3AU3A		TCTCTCTC	A	AGTTCTCT	
1688	CCAGUUGA	CUGAUGAG	X	CGAA	IAA-3000		CCAA3TTT	C	TGCACTGG	
1689	GCAG3AGC	CUGAUGAG	X	CGAA	IGA3AU3C		CAAGTTCT	T	GCAGTGGC	
1692	UCAG303C	CUGAUGAG	X	CGAA	IGA3AU3C		GTCTCTCT	A	CTGGCTGA	

1694	TAUCAGCC	CUGAUGAG	X	CGAA	IUGCA33A		TCCTGCACT	T	GGCTGATG	
1698	TACUCAUC	CUGAUGAG	X	CGAA	ICCA333C		GCACTG33C	T	GATGA3TG	
1722	ACCU3A3C	CUGAUGAG	X	CGAA	ICU33A33		C3TC3A33C	T	GCTCA33T	
1725	AA3A33UG	CUGAUGAG	X	CGAA	IC3A3333		33AG3T33C	T	CAG3T3TT	
1727	GA3A3A3C	CUGAUGAG	X	CGAA	IA33CA33U		A3CT33CTC	A	33T3TTTC	
1732	TAAAA3AA	CUGAUGAG	X	CGAA	IACT33A3		CTCA33TC	T	TTCTTTTA	
1736	GACA3AAA	CUGAUGAG	X	CGAA	IAAA3A3C		33T3TTTC	T	TTAT33TC	
1745	333UC33C	CUGAUGAG	X	CGAA	IA3A3AAA		TTTAT3TC	A	333A3A3C	
1753	T3AAA33U	CUGAUGAG	X	CGAA	IUG3333U		A333A3AC	C	A3TTTCA	
1754	T33AAA3C	CUGAUGAG	X	CGAA	I3U3333C		333A3A3C	A	33TTTCAA	
1761	T33U33UU	CUGAUGAG	X	CGAA	IAAA3333		CAC3TTTC	A	AAA3AACA	
1764	AA3A33C	CUGAUGAG	X	CGAA	IUU333UU		AAA3A3AC	A	33T3TTT	
1772	A3AAAA3	CUGAUGAG	X	CGAA	IC33333C		GAACA33C	T	CTTTTCT	
1775	3UA3AAAA	CUGAUGAG	X	CGAA	IA33333U		ACA333TC	T	TTT3TAC	
1781	CUU3333U	CUGAUGAG	X	CGAA	IAAAAA3A		TCTTTTTC	T	ACC33AA3	
1784	ACU3333C	CUGAUGAG	X	CGAA	IUA3AAAA		TTTTCTAC	C	33A33A3T	
1790	CUU3333C	CUGAUGAG	X	CGAA	IA3AC33U		A3A3T3TC	T	33A3CA33	
1802	TU33CA3U	CUGAUGAG	X	CGAA	ICU33CA3A		TCT33A3C	A	A3T33CAA	
1809	CAAU333U	CUGAUGAG	X	CGAA	ICAA333U3		CAA3TT3C	A	AA3CA3T3	
1814	GAUU33CA	CUGAUGAG	X	CGAA	ICUU33CA		TGCAAA3C	A	TT33AATC	
1823	3U33333C	CUGAUGAG	X	CGAA	IAUU33CA		TT33AATC	A	GACA33AC	
1827	UGAA333C	CUGAUGAG	X	CGAA	IUG33AUU		AATCA3AC	A	3CACTT3A	
1830	UCU33AA3	CUGAUGAG	X	CGAA	ICU333U3		CAGAC33C	A	CT33AA3A	
1832	CCUCU33A	CUGAUGAG	X	CGAA	IUG3333C		GACA33AC	T	33AA3A33	
1845	CC33CA3C	CUGAUGAG	X	CGAA	ICAC333C		3A333T3C	A	GCT33333	
1848	3CU3333C	CUGAUGAG	X	CGAA	ICU33CA3C		33TGCA3C	T	33333A3C	
1857	CUU333AC	CUGAUGAG	X	CGAA	ICU3333C		33333A3C	T	3T333AA3	
1867	UGA3333C	CUGAUGAG	X	CGAA	ICUU333A		TC33AA3C	A	3A3TCA3	
1874	AU33333C	CUGAUGAG	X	CGAA	IAC333U3		CAGAG3TC	A	33CA3CAT	
1878	CC33AU3C	CUGAUGAG	X	CGAA	IC333AC3C		33T3A33C	A	3CAT3333	
1881	CUU3333A	CUGAUGAG	X	CGAA	ICU3333U3		CAG33A3C	A	T3333AA3	
1891	3333333C	CUGAUGAG	X	CGAA	ICUU3333		3333AA3C	C	A333333C	
1892	3333333C	CUGAUGAG	X	CGAA	IG33333C		333AA33C	A	3333333C	
1896	3CAG333C	CUGAUGAG	X	CGAA	ICU3333U		A33CA33C	C	3333333C	
1897	A3CA333C	CUGAUGAG	X	CGAA	IG33333C		33CA333C	C	3333333C	
1900	3UCA33AC	CUGAUGAG	X	CGAA	IC33333U		A333333C	C	CT3333AC	
1901	33UCA33A	CUGAUGAG	X	CGAA	IG33333C		3333333C	C	T3333A33	
1902	AC33CA3C	CUGAUGAG	X	CGAA	IG33333C		3333333C	T	3CT3A33T	
1905	UG3A333C	CUGAUGAG	X	CGAA	ICAG333C		3333333C	T	3A3333CA	
1912	333AG33U	CUGAUGAG	X	CGAA	IA333CA3		CT3A33TC	C	A3A3333C	
1913	3333A33U	CUGAUGAG	X	CGAA	IGA333CA		T3A3333C	A	3ACT333C	
1917	UGAA3333	CUGAUGAG	X	CGAA	IUG333AC		GT33CA3C	T	3333TTCA	
1919	GAU3AA3C	CUGAUGAG	X	CGAA	IA333333		CCAGACTC	C	3TTTCATC	
1921	3333AU3A	CUGAUGAG	X	CGAA	IC33333U		3ACT333C	T	T3AT333C	
1925	CUU3333A	CUGAUGAG	X	CGAA	IAA3333A		TC3333TC	A	T3333AAG	
1928	AG333333	CUGAUGAG	X	CGAA	IAU3AAGC		3CTTCATC	C	33AAG3CT	
1929	CAG3333U	CUGAUGAG	X	CGAA	IGAUGAA3		CTTCAT3C	C	3AAG3CTG	

1930	UCAAGCUU	CUGAUGAG	X	CGAA	UGGAUGAA		TTCATCCC	C	AAAGCTGA	
1931	GUCAGGCU	CUGAUGAG	X	CGAA	UGGAUGAA		TTCATCCC	A	AGGCTGAC	
1935	GCCCGUCA	CUGAUGAG	X	CGAA	UGGUGGGG		CCCAAGG	C	TGACGGGG	
1936	AGCCCGUC	CUGAUGAG	X	CGAA	UGGUGGGG		CCCAAGG	T	GAAGGGGT	
1944	UGGCGCGC	CUGAUGAG	X	CGAA	UGGCGCGC		TGACGGGG	T	GGGGGGGA	
1950	UGACAAUC	CUGAUGAG	X	CGAA	UGGCGAGC		GCTGGGG	C	GATTGTGA	
1961	GUAGUGCA	CUGAUGAG	X	CGAA	UGGCAAAA		TTGTGAAC	A	TGGATTAC	
1967	CACGACGU	CUGAUGAG	X	CGAA	UGGCAAGU		ACATGGAC	T	AGGTGGTG	
1981	AAAGUGGU	CUGAUGAG	X	CGAA	UGGCGAAC		TTGGGAGC	C	AGAAAGTT	
1982	GAAGUGGU	CUGAUGAG	X	CGAA	UGGCGAAC		TGGGAGGC	A	GAAGTTTC	
1991	UGGUGUGC	CUGAUGAG	X	CGAA	IAAGGUGC		GAAGTTTC	C	GCAAGAAA	
1994	GUUUUGUC	CUGAUGAG	X	CGAA	UGGGAAGG		CGTTGGGC	A	GAGAAAAA	
2008	AGAGCGUC	CUGAUGAG	X	CGAA	UGGUGUGU		AAAGGGGC	C	GAGGGTCT	
2016	UGGAGGUG	CUGAUGAG	X	CGAA	IAAGGUGG		GGAGGGTC	T	CAGGTGGA	
2018	GUUGGAGG	CUGAUGAG	X	CGAA	IAAGGUGU		AGGTTGTC	A	GCTGGAGG	
2020	AGGUGUGA	CUGAUGAG	X	CGAA	UGGGAAGG		GTTGTCAC	C	TGGAAGGT	
2021	CAGCGUGG	CUGAUGAG	X	CGAA	UGGGAAGG		GTGTCAGC	T	GGAGGGTG	
2035	UGGAACAG	CUGAUGAG	X	CGAA	UGGUGAAC		TTGAAAGG	A	CTGTTCAG	
2037	GGUGGAAC	CUGAUGAG	X	CGAA	UGGUGUGU		GAAAGGAC	T	TTTCAAGG	
2042	GAGCAGGC	CUGAUGAG	X	CGAA	IAAGGAGG		CAGTGTTC	A	GGTGGTTC	
2049	GUAGUGUG	CUGAUGAG	X	CGAA	ICAGGUGG		CAAGGTGC	T	CAAGTAAG	
2051	GUUGGAGU	CUGAUGAG	X	CGAA	IAAGGAGC		GGTGGTTC	A	AGTACGAG	
2054	GGGUGUGU	CUGAUGAG	X	CGAA	UGGGAAGC		TGCTGAAC	T	AGGAGGGG	
2072	GAGGCGGG	CUGAUGAG	X	CGAA	UGGCGGGG		GGGCGGGC	C	GGGGGCTC	
2073	GGAGGGGG	CUGAUGAG	X	CGAA	UGGCGGGG		GGGCGGGC	C	GGGGGCTC	
2074	AGGAAGGG	CUGAUGAG	X	CGAA	UGGCGGGG		GGGCGGGC	C	GGGGGCTC	
2078	GGGCAAGG	CUGAUGAG	X	CGAA	UGGCGGGG		GGGCGGGC	C	GGGGGCTC	
2079	GGGCAAGG	CUGAUGAG	X	CGAA	UGGCGGGG		GGGCGGGC	T	GGGGGCTC	
2081	GGGCGGCA	CUGAUGAG	X	CGAA	IAAGGCGG		GGGCGGTC	C	TGGGCGGC	
2082	AGGCGGCG	CUGAUGAG	X	CGAA	IAAGGCGG		GGGCGGTC	T	GGGCGGCT	
2089	AGGACAGA	CUGAUGAG	X	CGAA	UGGCGGAG		GTGGGGGC	C	TGTGTGCT	
2090	CAGGACAG	CUGAUGAG	X	CGAA	UGGCGGCA		TGGGGGTC	T	GTGTGTGG	
2092	GGGAGGAG	CUGAUGAG	X	CGAA	IAAGGCGG		GGGCGGTC	T	GTGTGTGG	
2097	CGAGGGGG	CUGAUGAG	X	CGAA	ICAGGAGG		GTGTGTGC	T	GGGGGTGG	
2102	AUGGUGCA	CUGAUGAG	X	CGAA	UGGGAAGC		TGCTGGGC	C	TGGAAGAT	
2103	UAUGGUGC	CUGAUGAG	X	CGAA	UGGGAAGC		GCTGGGGC	T	GGAAGATA	
2114	GGGCGUGU	CUGAUGAG	X	CGAA	IAUGGUGU		AGGATATC	C	AGAGGGGC	
2115	AGGCGGUG	CUGAUGAG	X	CGAA	IAUGGUGU		AGGATATC	A	CAGGGGCT	
2117	CGAGGGGG	CUGAUGAG	X	CGAA	UGGGAAGU		ATATGGAC	A	GGGGGTGG	
2122	GGGCGGCA	CUGAUGAG	X	CGAA	UGGCGGGG		CAGAGGGC	C	TGGGCGAC	
2123	GGGCGGGC	CUGAUGAG	X	CGAA	UGGCGGGG		CAGAGGGC	T	GGGGGAGC	
2129	CAGGAGGG	CUGAUGAG	X	CGAA	UGGCGAGG		GCTGGGGC	A	GCTTGGTG	
2131	AGGACGAA	CUGAUGAG	X	CGAA	UGGCGGCA		TGGGCGAC	C	TTGTGTGT	
2132	CAGGACGA	CUGAUGAG	X	CGAA	UGGCGGGC		GGGCGGAC	T	TGTTGTGG	
2139	GCACAGGC	CUGAUGAG	X	CGAA	ICAGGAGG		GTTCGTGC	T	GGGTGTGC	
2152	GGGUGGUG	CUGAUGAG	X	CGAA	UGGCGGAC		GTGGGGGC	C	CAGGAGGC	
2153	GGGUGGUG	CUGAUGAG	X	CGAA	UGGCGGCA		TGGGGGGC	C	AGGAGGGG	

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Table IV

2154	33GG3UCC	CUGAU3AG	X	CGAA	I3GCCC3C		3CG333CC	A	3GATCC3C	
2159	A33C3333	CUGAU3AG	X	CGAA	IUCUC333		CC3AG3AC	C	CGC333CT	
216	CA33C33C	CUGAU3AG	X	CGAA	I3UCUC33		CC3AG3AC	C	3CC333CTG	
216	3CU3A33C	CUGAU3AG	X	CGAA	I3G33UCC		33AC333C	C	3CCT3A3C	
2166	ACA3CUCA	CUGAU3AG	X	CGAA	I3G3C333		CC3C333C	C	CGAG333T	
2167	UA3A3CUU	CUGAU3AG	X	CGAA	I3C33333		CC3C333C	T	3AG333TA	
2172	CAAA3UAC	CUGAU3AG	X	CGAA	IUC3A33C		3CCT3A3C	T	3TACTTTG	
2177	CU33ACAA	CUGAU3AG	X	CGAA	IUA3A3CU		AGCT3TAC	T	TT3TCAA3	
218	AU3CA3CU	CUGAU3AG	X	CGAA	IACAAA3U		ACTTT3TC	A	AG3T33AT	
220	3333AU33	CUGAU3AG	X	CGAA	IUC3U333		CGTAC3AC	A	CCATCC3C	
2212	U33333AU	CUGAU3AG	X	CGAA	IUC3U3UA		TAC3ACAC	C	ATCC333A	
2213	CU33333A	CUGAU3AG	X	CGAA	I3U3U33U		AC3AC3AC	A	TCC333A3	
2214	GU3CU333	CUGAU3AG	X	CGAA	I3U3333U		AC3AC3AC	C	CC3AG3AC	
2217	U3U3CU33	CUGAU3AG	X	CGAA	I3AU333U		CA3CATCC	C	CC3AG3AC	
2219	CU3U3CU3	CUGAU3AG	X	CGAA	I33AU33U		AC3CATCC	C	CA3AG3AC	
222	3CU3U3CU	CUGAU3AG	X	CGAA	I333AU33		CCATCC3C	C	AG3AC333	
222	3CU3U3CU	CUGAU3AG	X	CGAA	I3333AU3		CA3C333C	A	33AC333C	
222	CU3U3A3CC	CUGAU3AG	X	CGAA	IUCUC333		CC3AG3AC	A	33CTCA33	
222	CU3C333U	CUGAU3AG	X	CGAA	I3CUC33C		33AC333C	T	CA333A33	
2231	3AC3U3CC	CUGAU3AG	X	CGAA	I3CUC33U		AC3AG3TC	A	CG3A33TC	
2243	GU33333A	CUGAU3AG	X	CGAA	IAC3U3CC		CG3A33TC	A	TG3CC33C	
2245	AU3AU3CU	CUGAU3AG	X	CGAA	I33AU3AC		3TCATC3C	C	AGCATCAT	
2246	3AU3AU3C	CUGAU3AG	X	CGAA	I3C3AU3A		TCATC3CC	A	3CATCATC	
2249	U3U3AU3A	CUGAU3AG	X	CGAA	I3U3333A		TC3C3A3C	A	TCATCAAA	
2250	333U3U3A	CUGAU3AG	X	CGAA	I3U3CU33		CC3AG3AC	A	TCAAA3CC	
2255	CU33333U	CUGAU3AG	X	CGAA	I3U3AU3C		3CATCATC	A	AA3CC3A3	
2259	U3U3CU33	CUGAU3AG	X	CGAA	I3U3AU33		CATCAAA3	C	CC3AA3CA	
2260	GU3U3CU3	CUGAU3AG	X	CGAA	I3U3U3AU		ATCAAA3C	C	CA3AA3AC	
2261	CU3U3U3U	CUGAU3AG	X	CGAA	I3GU3U3A		TCAAA3CC	C	AA3AA3CA3	
2262	AC3U3U3C	CUGAU3AG	X	CGAA	I3GU3U33		CAAA3CC3	A	3AA3CA3T	
2267	GC3AU3AC	CUGAU3AG	X	CGAA	IUCUC333		CC3A3AA3	A	3TACT3CC	
2273	AC3CA3CC	CUGAU3AG	X	CGAA	IUA3CU3U		ACA33TAC	T	3C3T333T	
2290	U33AC3AC	CUGAU3AG	X	CGAA	I3CA3U3C		CG3TAT3C	C	3T3T3CCA	
2297	GG3CU3CU	CUGAU3AG	X	CGAA	IAC3A333		CC3T33TC	C	AG3AG3CC	
2298	CG3CCU3C	CUGAU3AG	X	CGAA	I3AC3A3C		CGT33TC	A	3AA333CC	
2306	CCAU333C	CUGAU3AG	X	CGAA	I3CU3CU3		CA3AA33C	C	3CCCAT33	
2308	U33CC3A3	CUGAU3AG	X	CGAA	I333CCU3		AA33333C	C	CATGG3CA	
2309	GU3CC3AU	CUGAU3AG	X	CGAA	I3C333CU		AG3CC33C	C	AT333CAC	
2310	CU3U3CC3A	CUGAU3AG	X	CGAA	I33333CC		GG3CC3CC	A	TG333CA3	
2316	U3333A3C	CUGAU3AG	X	CGAA	I3CC3AU33		CCATGG3C	A	3TCC3CA	
2321	GG3CU3GC	CUGAU3AG	X	CGAA	IAC3U3CC		GG3AC3TC	C	3CAAG3CC	
2324	3AA333CU	CUGAU3AG	X	CGAA	I333AC3U		AC3T333C	A	AG3CCTTC	
2327	CU3CU3GA	CUGAU3AG	X	CGAA	I3CU3U3C		CG3AA33C	C	TT3AAG3A	
2330	GU3CU3GA	CUGAU3AG	X	CGAA	I3CU3U3C		GC3AA33C	T	TC3AAG3C	
2333	GU33CU3U	CUGAU3AG	X	CGAA	I3AG3CCU		AG3CCTTC	A	AG3CC3AC	
2334	AG3AG3CU	CUGAU3AG	X	CGAA	I3CU3U3A		TC3AAG3C	C	AC3CTCTC	
2340	UAG3AG3C	CUGAU3AG	X	CGAA	I3CU3U33		CA3AG3CC	A	CG3CTCTA	

2345	CAAAGUAAG	CUGAUGAAG	X	CGAA	IACGUGGC	GCTACGTC	T	CTACCTTG
2347	GUCAAAGU	CUGAUGAAG	X	CGAA	IAGACGUG	CACGTCTC	T	ACCTTGAC
2350	UCUGUCAA	CUGAUGAAG	X	CGAA	IUAAGAGA	GTCTGTAC	C	TTGACAGA
2351	GUUUGUUA	CUGAUGAAG	X	CGAA	IGUAGAGA	GTCTGTAC	T	TGACAGAC
2356	UGGAGGUG	CUGAUGAAG	X	CGAA	IUGAAGUG	ACCTTGAC	A	GACCTGCA
2360	CGGCGGGA	CUGAUGAAG	X	CGAA	IUGUGUGA	TGACAGAC	C	TGAGGCGG
2361	AGGGGUGG	CUGAUGAAG	X	CGAA	IGUGUGUG	GACAGAC	T	GACGCGGT
2363	GUAGGGUG	CUGAUGAAG	X	CGAA	IAGGGUGG	CAGACGTC	C	AGGCGTAC
2364	UGUAGGGC	CUGAUGAAG	X	CGAA	IAGGGUGG	AGACCTGC	A	GCGGTACA
2367	GCAUGUAG	CUGAUGAAG	X	CGAA	IUGGAGAG	CTGCGAGC	C	GTACATGC
2370	UGUGGCGA	CUGAUGAAG	X	CGAA	IUAAGGUG	AGGCGTAC	A	TGCGAGAG
2379	CGACGAAAG	CUGAUGAAG	X	CGAA	IUGGCAUG	CATGCGAC	A	GTGCGTGG
2389	UGGAGGGG	CUGAUGAAG	X	CGAA	IUGGAGAA	TTGCTGGC	T	CACCTGCA
2391	CGUGGAGG	CUGAUGAAG	X	CGAA	IAGGCGAG	CTGCGGTC	A	CGTGGAGG
2393	CGGCGGGA	CUGAUGAAG	X	CGAA	IUGGAGGA	TGGCTGAC	C	TGGAGGAG
2394	UGUGGUGG	CUGAUGAAG	X	CGAA	IGUGAGGG	GGCTGAGC	T	GCAAGGAG
2397	UGGUGUGG	CUGAUGAAG	X	CGAA	IAGGAGGA	TGACCTGC	A	GAGAGGCA
2404	AGGGGGUG	CUGAUGAAG	X	CGAA	IUGGGUGG	CAGGAGAC	C	AGGGGGGT
2405	CAGGGGGC	CUGAUGAAG	X	CGAA	IGUGGGUG	AGGAGAGC	A	GCGGGGCT
2408	CGUGAGGG	CUGAUGAAG	X	CGAA	IUGGGUGG	AGACGAGC	C	GGCTGAGG
2409	CGGUGAGG	CUGAUGAAG	X	CGAA	IGGUGGUG	GAGGAGGC	C	GCTGAGGG
2410	CAUGGGUG	CUGAUGAAG	X	CGAA	IUGGGUGG	CAGGCGGC	T	GAGGGATG
2410	AUGAGGAC	CUGAUGAAG	X	CGAA	IAGGGUGG	AGGGATGC	C	GTCGTCAT
2419	GUUGGUGA	CUGAUGAAG	X	CGAA	IAGGAGGG	CGGTGCTC	A	TGAGGAGG
2426	AGGAGGUG	CUGAUGAAG	X	CGAA	IUGGAGUG	CATCGAGC	A	GAGCTGCT
2441	CAGGGAGG	CUGAUGAAG	X	CGAA	IUGGUGUG	AGGAGAGC	T	GCTGGGTC
2443	UGGAGGGA	CUGAUGAAG	X	CGAA	IAGGUGUG	CAGGCTGC	C	TGCTGAGG
2444	AUGGAGGG	CUGAUGAAG	X	CGAA	IAGGUGUG	AGGCTGTC	T	GCTGAGAT
2446	UGAUGAGG	CUGAUGAAG	X	CGAA	IAGGAGGUG	AGCTGCTC	C	CTGAATGA
2447	UGGAGUGA	CUGAUGAAG	X	CGAA	IAGGAGGC	GCTGCTGC	C	TGAGGAGG
2448	CGGAGUGG	CUGAUGAAG	X	CGAA	IAGGAGGA	CTGCTGCG	T	GAGGAGGG
2454	CGGUGGUG	CUGAUGAAG	X	CGAA	IUGGAGUG	AATGAGGG	C	AGGAGTGG
2459	GCGAGUGG	CUGAUGAAG	X	CGAA	IUGGUGAU	ATGAGGGC	A	GAGTGGGC
2462	GAAGGAGC	CUGAUGAAG	X	CGAA	IUGGUGUG	AGGCGAGC	A	GTGGGCTC
2464	GUGGAGGA	CUGAUGAAG	X	CGAA	IUGGAGGC	GAGTGGGC	C	TCTGAGAC
2469	CGGCGAAG	CUGAUGAAG	X	CGAA	IUGGAGUG	CAGTGGGC	T	CTGAGAGG
2471	GAGGUGGA	CUGAUGAAG	X	CGAA	IAGGCGAG	GTGGGCTC	T	TGAGGTCG
2480	GCGGAGGA	CUGAUGAAG	X	CGAA	IAGGUGGA	TGAGGTCG	T	TGAGGTCG
2483	GAGGCGGA	CUGAUGAAG	X	CGAA	IAGGAGGUG	AGGTCTTC	C	TAGGCTTC
2484	UGGAGGUG	CUGAUGAAG	X	CGAA	IAGGAGGC	CGTCTTTC	T	AGGCTTCA
2489	GAGGAGGA	CUGAUGAAG	X	CGAA	IUGGAGGA	TGCTAGGC	T	TGAGTGGC
2492	GUGGCGGA	CUGAUGAAG	X	CGAA	IAGGCGGA	IAGGCTTC	A	TGAGGCGC
2498	GCGGUGGUG	CUGAUGAAG	X	CGAA	IAGGAGGA	TGAGTGGC	C	AGGAGGCG
2499	CGGCGGUG	CUGAUGAAG	X	CGAA	IUGGAGUG	CATGTGGC	A	GAGGCGGC
2501	CAGGCGGUG	CUGAUGAAG	X	CGAA	IUGGAGGA	TGTGGGAC	C	AGGCGGTC
2502	GAGGCGG	CUGAUGAAG	X	CGAA	IGGCGGAG	GTGGGAGC	A	CGGCGTGC
2506	AUGGCGAG	CUGAUGAAG	X	CGAA	IUGGUGUG	CACGAGGC	C	GTGGGATC

2513	GCCTCCU3A	CUGAUGAG	X	CGAA	ICGACAC3G		CCCTGCGC	A	TCA3333C	
2516	CUUGCCCC	CUGAUGAG	X	CGAA	IAU3CGCA		TCCCATC	A	3333CAA3	
2522	GUAGGACU	CUGAUGAG	X	CGAA	ICCCU3A		TCA333G	A	AGTCTAC	
2527	UGGAC3UA	CUGAUGAG	X	CGAA	IAUUGCC		GGCAAGTC	C	TAC3TCA	
2538	CU3GAC3U	CUGAUGAG	X	CGAA	IGA3U3C		GCAG3TC	T	AC3TCA3	
2534	CU33CA3U	CUGAUGAG	X	CGAA	IA33UA33		CTAC3TC	C	AGT3CA3	
2535	CCU33CA3	CUGAUGAG	X	CGAA	IGA33UA3		CTAC3TC	A	GT33CA33	
2540	3AUCCCCU	CUGAUGAG	X	CGAA	ICA3U33A		TCAG3TC	C	AG33ATC	
2541	33AUCCCC	CUGAUGAG	X	CGAA	ICA3AU33		TCAG3TC	A	GG33ATC	
2549	CCCCUGCC	CUGAUGAG	X	CGAA	IAUCCCCU		AG33ATC	C	CG3333C	
2550	A3CCCU3C	CUGAUGAG	X	CGAA	IGAUCCC		GG33ATC	C	GC3333C	
2553	UG3AGCC	CUGAUGAG	X	CGAA	IC333AU3		GATCCCG	A	GGCTCCA	
2558	GA33AU33	CUGAUGAG	X	CGAA	ICCCUGCC		CGCA33G	T	CCATCCTC	
2560	GA3A33AU	CUGAUGAG	X	CGAA	IA33CCU3		CAG33TC	C	ATCCTCTC	
2561	GA3A33GA	CUGAUGAG	X	CGAA	IGA3CCCU		AG33TC	A	TCCCTCC	
2564	CGU33AGA	CUGAUGAG	X	CGAA	IAU33AGC		GCTCCATC	C	TCCCA33	
2565	GG3UG3AG	CUGAUGAG	X	CGAA	IGAUG3AG		CTCCATC	T	CTCCA33C	
2567	CA33U333	CUGAUGAG	X	CGAA	IA33AU33		CCATCCTC	T	CCAC3CTG	
2569	A3CA3CCU	CUGAUGAG	X	CGAA	IGA333AU		ATCCTCTC	C	AGCT3CT	
2570	GA3CA3CC	CUGAUGAG	X	CGAA	IGA3AG3A		TCTCTTC	A	CGCT3CTC	
2574	UGCA3AGC	CUGAUGAG	X	CGAA	ICGU33AG		CTCCA33C	T	GCTCT3CA	
2577	GGCU3CA3	CUGAUGAG	X	CGAA	ICA3CCU3		CAGGTC	T	CTGCA3CC	
2579	CAG3CU3C	CUGAUGAG	X	CGAA	IA3CA333		CGCT3CTC	T	GCAGCCT3	
2582	GCACA3GC	CUGAUGAG	X	CGAA	ICA3A3CA		TGCTCTTC	A	GGCT3TC	
2585	GUAG3CA3	CUGAUGAG	X	CGAA	ICU33CA3A		TCTGCAGC	C	TGT3CTAC	
2586	CGUA3CA3	CUGAUGAG	X	CGAA	IGCU3CA3		CT3CA3CC	T	GT3CTA33	
2591	GUCC3CC3U	CUGAUGAG	X	CGAA	ICACA33C		GGCT3TC	T	AG3CC3AC	
2600	GUU3UCCA	CUGAUGAG	X	CGAA	IUGCC3CU		ACGGCGAC	A	TGGAGAAC	
2609	AAAACA3CU	CUGAUGAG	X	CGAA	IUUUCCA		TGGAGAAC	A	AGCT3TTT	
2613	CC3CAAA3	CUGAUGAG	X	CGAA	ICU33U3C		GAACAA3C	T	GTTC3CC3	
2640	GCAG3A3C	CUGAUGAG	X	CGAA	ICCCU3CC		33AG33CC	T	GTCCCT3C	
2643	AAAC3CA33	CUGAUGAG	X	CGAA	ICAGCCCC		CGGGCTGC	T	CCCT3CTT	
2645	CAAAAC3CA	CUGAUGAG	X	CGAA	IA3CA3CC		GGCT3CTC	C	T333TTT3	
2646	CCAAAC3C	CUGAUGAG	X	CGAA	IGA3CA3C		GCTGCTCC	T	GGTTT33	
2666	CACCAACA	CUGAUGAG	X	CGAA	IAAAU3AU		ATGATTTT	T	TGTT33T3	
2677	AG3U3A33	CUGAUGAG	X	CGAA	IUCACCAAA		TT3GTGAC	A	CTTCACTT	
2679	UGAG3UGA	CUGAUGAG	X	CGAA	IUGUACCC		G3TGACAC	C	TCACTTCA	
2680	GU3A33UG	CUGAUGAG	X	CGAA	IGU3UAC		GT3ACAC	T	CACCTCAC	
2682	GG3UGA33	CUGAUGAG	X	CGAA	IAG3UGUC		GACACCTC	A	CCTCACCC	
2684	GU333UGA	CUGAUGAG	X	CGAA	IUGA33UG		CACCTCAC	C	TCACTCAC	
2685	CGU33UG3	CUGAUGAG	X	CGAA	IGU3AG3U		ACCTCAC	T	CACCCAC3	
2687	CGC3UG33	CUGAUGAG	X	CGAA	IAG3UGA3		CTCACCTC	A	CCAC3333	
2689	UUC3CCUG	CUGAUGAG	X	CGAA	IUGA33UG		CACCTCAC	C	CAC333AA	
2690	UUUCCCGU	CUGAUGAG	X	CGAA	IGU3AGGU		ACCTCAC	C	AC33GAAA	
2691	UUUUGCG	CUGAUGAG	X	CGAA	IGU3AG33		CCTCACCC	A	CG33AAAA	
2701	UGAG3GAA	CUGAUGAG	X	CGAA	IUUUUCG		GGGAAAA	C	TCTCTCAG	
2702	CCUGAGGA	CUGAUGAG	X	CGAA	IGUUUUCG		CGAAAA	T	TCTCTCAG	

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Table IV

2705	33UCUU3A CUGAUGAG X CGAA IAAG3UUU		AAACCTTC C TCA3GACC	
2706	333U3U3 CUGAUGAG X CGAA IGAA3GUU		AAACCTTC T CA33ACCC	
2708	CA333U3C CUGAUGAG X CGAA IA33AAGG		CCCTTCCT A G3A3CCCT	
2713	CG3A3CA3 CUGAUGAG X CGAA IUCCU3AG		CTCA33AC C CT33TCC3	
2714	UC33A3CA CUGAUGAG X CGAA IGUCU3GA		TCA33AAC C T33TCC3A	
2715	CU333A3C CUGAUGAG X CGAA IG3UCCUG		CAG33A3C T GGTCC3AG	
2716	3ACA3CUC CUGAUGAG X CGAA IACCA333		CCCT33TC C GA33T3TC	
2719	AUA3U3AG CUGAUGAG X CGAA IACA3CUU		GA33T3TC C CT3A3TAT	
2720	CAUA3UCA CUGAUGAG X CGAA IGACA3CU		AG3T3TCC C T3A3TAT3	
2731	CCAUA3UC CUGAUGAG X CGAA IG3ACA3C		G3T3TCC T GA3TATG3	
2741	CA3CA33C CUGAUGAG X CGAA ICAUA3CU		AGTAT33C T G3T33T3	
2753	CUU33G3A CUGAUGAG X CGAA IUU3A3CA		T33T3AA C T T333AA3	
2764	UU3A3CAC CUGAUGAG X CGAA IUU3UCC3		CG3AA3AC A GT33TGA	
2774	UA3A3G3A CUGAUGAG X CGAA IUU3A3CA		T33T3AA C T TCCCT3TA	
2777	IU3U3A3AG CUGAUGAG X CGAA IAA3U3CA		T3AACTTC C CT3TAGAA	
2778	CUU3UA3A CUGAUGAG X CGAA IGAA3U3C		3AACTTC C T3TA3AA3	
2779	UCU3CUAC CUGAUGAG X CGAA IG3AA3U3		AACTTC C T3TA3AA3	
2794	CCA33CA3 CUGAUGAG X CGAA ICCU33UC		3A33A33C C CT333T33	
2795	3CCA33CA CUGAUGAG X CGAA I3C3U33U		AC3A33CC C T333T33C	
2796	UG3CA33C CUGAUGAG X CGAA IG3CCU3C		CGA333CC T G33T33CA	
2804	AAAA3CC3 CUGAUGAG X CGAA ICA3CCCA		TG33T33C A CG3CTTTT	
2809	UGAA3AAA CUGAUGAG X CGAA ICC3U3CC		33CA333C T TTT3TTCA	
2817	CC33CAUC CUGAUGAG X CGAA IAA3AAAA		TTTT3TTT A 3AT3CC33	
2823	CGUG33CC CUGAUGAG X CGAA ICAU3U3A		TCA3AT3C C G3CCCA3C	
2827	A33CC3U3 CUGAUGAG X CGAA ICC33CAU		AT3CC33C C CAC33CC	
2828	UA33CC3U CUGAUGAG X CGAA IGCC33CA		T3CC33CC C AC33CCTA	
2829	AUA33CC3 CUGAUGAG X CGAA IG3CC33C		GCC33CC C A33CCCTAT	
2834	3333AAUA CUGAUGAG X CGAA ICC3U333		CCCA333C C TATTC3CC	
2835	A3333AAU CUGAUGAG X CGAA IGCC3U33		CCA333CC T ATTC3CC	
2840	3CAC3A33 CUGAUGAG X CGAA IAAUA33C		GCCTATTC C CCT33T3C	
2841	CG3A3CA3 CUGAUGAG X CGAA I3AAUA33		CCTATTC C CT33T33C	
2842	CC3CA3CA CUGAUGAG X CGAA IG3AAUA3		CTATTC C T33T33C	
2843	3CC3CA3C CUGAUGAG X CGAA IG33AAUA		TATTC3CC T G3T333C	
2852	CAG3CAGCA CUGAUGAG X CGAA ICC3CA3C		G3T3CC3C C T3C3CT3C	
2853	CCA3CA3C CUGAUGAG X CGAA IGCC3CA3		GT3CC3CC T GCT33T3C	
2856	UAU3CA3C CUGAUGAG X CGAA ICAG3CC3		CG3CC3C T GCT33ATA	
2859	GG3UAU3C CUGAUGAG X CGAA ICAG3CA3		CT3CT3C T G3ATA3CC	
2866	AG33U3C3 CUGAUGAG X CGAA IUUA3CA3		CTG3ATAC C CG3AT3CT	
2867	CA333U3C CUGAUGAG X CGAA IG3UA3CA		T3GATACC C G3A3CCCT	
2872	AC3U3CA3 CUGAUGAG X CGAA IUCC333U		ACC333AC C CT33AG3T	
2873	CA3CU3CA CUGAUGAG X CGAA IGUC3333		CC333AAC C T33AG3T3	
2874	GCACCU3C CUGAUGAG X CGAA IG3UCC33		CC333ACC T G3AG3T3C	
2883	AGU3G3UC CUGAUGAG X CGAA ICACCU3C		G3AG3T3C A G3G3ACT	
2891	GU3G3AGU CUGAUGAG X CGAA IU3G3CU		AGAG3GAC T ACT3CA3C	
2894	AUAGCU33 CUGAUGAG X CGAA IUAG3U3C		G3GACTAC T C3AG3TAT	
2896	GCAUAGCU CUGAUGAG X CGAA IAG3UAGU		GACTACTC C AG3TAT3C	
2897	GGCAUAGC CUGAUGAG X CGAA IGAG3UAGU		ACTACTCC A G3TATGCC	

2900	CCGGGCAU	CUGAUGAG	X	CGAA	ICUGGAGU		ACTCGAGC	T	ATGCCCGG	
2905	GAGGUCGG	CUGAUGAG	X	CGAA	ICAGUAGCU		AGCTATGG	C	CGGAGCTTC	
2906	GAGGUCGG	CUGAUGAG	X	CGAA	ICAGUAGCU		GCTATGCG	C	GGAGCTTC	
2911	CUGAUGGA	CUGAUGAG	X	CGAA	IUGCGGGC		GCGCGGAC	C	TCCAFGAG	
2912	UCUGAUGG	CUGAUGAG	X	CGAA	IUGCGGGC		CCCGGAGC	T	CCATCAAA	
2914	GUCUGAUG	CUGAUGAG	X	CGAA	IAGGUCGG		CGGAGCTTC	C	ATCAGAGC	
2915	GCGUCUGA	CUGAUGAG	X	CGAA	IAGGUCGG		GGAGCTTC	A	TCAAGAGC	
2918	ACUGGCGU	CUGAUGAG	X	CGAA	IAGGAGAG		CGTCCATC	A	GAGCGAGT	
2924	GUGAAGCU	CUGAUGAG	X	CGAA	IUGUGAUG		ATCAGAGC	C	AGTCTCAC	
2924	GUGAAGCU	CUGAUGAG	X	CGAA	IUGUGAUG		TCAAGAGC	A	GTCTCAC	
2928	UGAAGGUG	CUGAUGAG	X	CGAA	IAGGCGGU		AGCGAGTC	T	CACCTTCA	
2930	GUGAAGG	CUGAUGAG	X	CGAA	IAGGCGGU		CGAGTC	A	CGTTCAGC	
2932	CGGUGAAG	CUGAUGAG	X	CGAA	IUGAAGCU		AGTCTCAC	C	TTCAGGCG	
2933	GCGGUGA	CUGAUGAG	X	CGAA	IUGAAGCU		GTCTCAC	T	TCAAGCGC	
2936	GCGGCGGU	CUGAUGAG	X	CGAA	IAGGUGA		TCAAGCTC	A	ACCGCGGC	
2939	GAGGCGGC	CUGAUGAG	X	CGAA	IUGAAGG		CGTTCAGC	C	CGGCTTC	
2945	AGCGUGA	CUGAUGAG	X	CGAA	IACGCGGU		ACCGCGGC	T	TCAAGGCT	
2948	CGCAAGCU	CUGAUGAG	X	CGAA	IAGGCGGC		GCGGCTTC	A	AGGCTGGG	
2953	UUGCGCGC	CUGAUGAG	X	CGAA	IACUGAAG		TTCAGGCT	T	GGAGGAA	
2963	GCGACGCA	CUGAUGAG	X	CGAA	IUGCGUC		GGAAGAAC	A	TGGCGGC	
2972	AAAAGAGU	CUGAUGAG	X	CGAA	IAGAGCA		TGGGTGGC	A	AAGCTGTT	
2976	CGCGAAG	CUGAUGAG	X	CGAA	IUGUGGCA		TGGCAAGC	T	CTTGGGG	
2978	GACCGCAA	CUGAUGAG	X	CGAA	IAGUGUGC		GCAAGCTC	T	TGGGGTC	
2987	GAGCGGCA	CUGAUGAG	X	CGAA	IACCGCAA		TGGGGTC	T	TGGGGTC	
2994	GACACUUC	CUGAUGAG	X	CGAA	IACCGAAG		CTTGGGGC	T	GAAAGTC	
3003	ACAGGCGU	CUGAUGAG	X	CGAA	IACACUUC		GAAAGTC	A	CAGGCTGT	
3005	AAAAGGCG	CUGAUGAG	X	CGAA	IUGACACU		AGTGTGAC	A	GCTGTGTT	
3008	CAGAAACA	CUGAUGAG	X	CGAA	IUGUGGAC		GTCACAGC	C	TGTTCTG	
3009	CCAGAAAC	CUGAUGAG	X	CGAA	IUGUGGCA		TCACAGGC	T	GTGCTGG	
3015	GCAAAUCG	CUGAUGAG	X	CGAA	IAGAGAGG		CGTGTTC	T	GAGTTGCG	
3024	UGUGACCG	CUGAUGAG	X	CGAA	ICAAAUUC		GAGTTTGC	A	GCTGAACA	
3032	UGGAGGCG	CUGAUGAG	X	CGAA	IUGACGCU		AGGTGAAC	A	GCTGCGAG	
3035	CGUGUGGA	CUGAUGAG	X	CGAA	IUGUGGCA		TGAACAGC	C	TCCAGAGG	
3036	CGUGUGGG	CUGAUGAG	X	CGAA	IUGUGGUC		GAAACAGC	T	CCAAGCGG	
3038	CACCGGCU	CUGAUGAG	X	CGAA	IAGGCGGU		ACAGGCTC	C	AGAGGTCG	
3039	ACACCGUC	CUGAUGAG	X	CGAA	IAGGCGGU		CAGGCTTC	A	GAGGTCGT	
3050	GAGGUGGG	CUGAUGAG	X	CGAA	IACACCGG		GCGTGTGC	A	CGAAGATC	
3052	UAGAGGUG	CUGAUGAG	X	CGAA	IUGGACAC		GTGTGCA	C	AACATCTA	
3055	GUAGAGUG	CUGAUGAG	X	CGAA	IUGGACAC		TGTGCA	A	ACATCTAC	
3056	CUUGGAGA	CUGAUGAG	X	CGAA	IUGGAGCG		GCAAGAAC	A	TCTAGAA	
3059	GAGGUGGU	CUGAUGAG	X	CGAA	IAGGUGGG		CGAAGATC	T	ACAGGATC	
3062	GAGGAGUC	CUGAUGAG	X	CGAA	IUGAGAGU		ACATCTAC	A	AGATCTTC	
3068	CAGGAGGA	CUGAUGAG	X	CGAA	IAGGUGGU		ACAAGATC	C	TCTGCTG	
3069	GCAAGCAGG	CUGAUGAG	X	CGAA	IAGGUGGU		CAAGATTC	T	CGTGTGGC	
3071	UGGAGGCA	CUGAUGAG	X	CGAA	IAGGAGUC		AGATCTTC	C	TGCTGAGG	
3072	CGUGGAGC	CUGAUGAG	X	CGAA	IAGGAGUC		GATCTTC	T	GCTGAGG	
3075	ACGCGUGC	CUGAUGAG	X	CGAA	IAGGAGG		CTCTCTGC	T	GAGGCGT	

3078	UGUACGCG	CU3AU3AG	X	CGAA	ICACACAG		CCTGCTGC	A	GGGTACAA	
3086	GU3AAAAC	CU3AU3AG	X	CGAA	IUAAGCGU		AGGCTAC	A	GGTTTCAC	
3093	CACAUGCG	CU3AU3AG	X	CGAA	IAAAACUG		CAGGTTTC	A	CGCATGTC	
3097	AGCACACA	CU3AU3AG	X	CGAA	ICGUGAAA		TTTCACGC	A	TGTGTGCT	
3105	GGAGCGCG	CU3AU3AG	X	CGAA	ICACACAU		AGGTGTGC	T	GCAGCTGC	
3108	AUGGGAAG	CU3AU3AG	X	CGAA	ICAGCACA		TGTGTGTC	A	GCTGCGAT	
3112	GAAGUGCG	CU3AU3AG	X	CGAA	ICUGCAGC		GCTGCAGC	T	CGCATTTG	
3113	AUGAAAGG	CU3AU3AG	X	CGAA	IAGTUGCA		TGCAGCTC	C	CATTTCAT	
3114	GAUGAAAG	CU3AU3AG	X	CGAA	IAGTUGCG		GCAGCTGC	C	ATTTCATC	
3115	UGAUGAAA	CU3AU3AG	X	CGAA	IAGAGCGU		CAGCTGCG	A	TTTATACA	
3120	GUUGCGGA	CU3AU3AG	X	CGAA	IAAAUGGG		CGCATTTG	A	TCAGCAAG	
3123	AAAGTUGG	CU3AU3AG	X	CGAA	IAUGAAAG		ATTTATGC	A	GCAAGTTT	
3126	UGCAAAAG	CU3AU3AG	X	CGAA	ICUGAUGA		TCATCAGC	A	AGTTTGA	
3140	AAAGTUGG	CU3AU3AG	X	CGAA	IUGTUGCG		GGAAGAAC	C	CGCATTTT	
3141	AAAGTUGG	CU3AU3AG	X	CGAA	IUGTUGCG		GGAAGAAC	C	CACATTTT	
3142	AAAAAGG	CU3AU3AG	X	CGAA	IUGTUGCG		AAGAAAGC	C	ACATTTTT	
3143	AAAAAGG	CU3AU3AG	X	CGAA	IUGTUGCG		AGAAAGC	A	CATTTTTC	
3145	AGGAAAAA	CU3AU3AG	X	CGAA	IUGGCGG		AACCGGAC	A	TTTTTCT	
3152	GACGCGCA	CU3AU3AG	X	CGAA	IAAAAAUG		CATTTTTC	C	TGCGGCTC	
3153	UGAGCGCG	CU3AU3AG	X	CGAA	IAGAAAAU		ATTTTTCG	T	GGCGGCA	
3161	GUCAAGGA	CU3AU3AG	X	CGAA	IAGCGCGA		TGCGGCTC	A	TGTGTGAC	
3164	CGUGUGAG	CU3AU3AG	X	CGAA	IAGGACCG		GCGTCACT	T	CTGACAG	
3166	GGGUGGUG	CU3AU3AG	X	CGAA	IAGGAGAG		GTCATGTC	T	GACAGGCG	
3170	GGAGGCGG	CU3AU3AG	X	CGAA	IUGCAGGA		TGTGTGAC	A	GGGCTGCG	
3175	CAGAGGGA	CU3AU3AG	X	CGAA	IUGGUGG		GACAGGCG	C	TGGGTGTG	
3176	GCAAGGCG	CU3AU3AG	X	CGAA	IUGGUGG		ACAAGGCG	T	GGGTGTGC	
3178	UAGCAGAG	CU3AU3AG	X	CGAA	IAGGCGG		AGGCGGTC	C	CTGTGTGA	
3179	GUAAGCAG	CU3AU3AG	X	CGAA	IAGGCGCG		GGGCTGCG	C	TGTGTGAC	
3180	AGUAGCAG	CU3AU3AG	X	CGAA	IAGGCGCG		GGGCTGCG	T	CTGTGTGT	
3182	GAGGUAAG	CU3AU3AG	X	CGAA	IAGGCGAG		CGTGGCTC	T	GCTACTGC	
3185	GAUGGAGG	CU3AU3AG	X	CGAA	ICAGAGGG		CGCTGTGC	T	ACTGATGC	
3188	CAGGAGG	CU3AU3AG	X	CGAA	IUAGCAGG		TGTGTGAC	T	CGATGCTG	
3190	UUGCAGGA	CU3AU3AG	X	CGAA	IAGGUAAG		TGTGTGTC	C	ATGCTGAA	
3191	UUGCAGGA	CU3AU3AG	X	CGAA	IAGGUAAG		GCTACTGC	A	TGTGAAAG	
3194	GGGUGGCA	CU3AU3AG	X	CGAA	IAGGUAAG		ACTGATGC	C	TGAAAGCG	
3195	UGGUGGUG	CU3AU3AG	X	CGAA	IAGGUAAG		CTGATGCG	T	GAAAGGCA	
3200	GGGUGGUG	CU3AU3AG	X	CGAA	IUGGUGAG		CTGAAAGC	C	AAGAAAGC	
3205	UGGUGGUG	CU3AU3AG	X	CGAA	IUGGUGAG		TGAAAGCG	A	AGAAAGCA	
3211	GACAUAGG	CU3AU3AG	X	CGAA	ICGUGGUG		AAGAAAGC	A	GGGATGTC	
3220	UGGCGCGG	CU3AU3AG	X	CGAA	ICGACAGC		GATGTGTC	T	GGGGGCGA	
3229	GGGCGGUG	CU3AU3AG	X	CGAA	ICGCGGAG		CTGGGGGC	C	AAGGGGCG	
3230	GGGCGGUG	CU3AU3AG	X	CGAA	ICGCGGAG		TGGGGGCG	A	AGGGGCGC	
3238	GGGCGGCG	CU3AU3AG	X	CGAA	ICGCGGUG		AAAGGGCG	C	GCGGGGCG	
3241	AGAGGGCG	CU3AU3AG	X	CGAA	ICGCGGCG		GGGCGGCG	C	GGGCGGCT	
3245	GGGCGAGG	CU3AU3AG	X	CGAA	ICGCGGCG		CGGCGGCG	C	CTGTGCGC	
3246	AGGCGAGA	CU3AU3AG	X	CGAA	ICGCGGCG		CGGCGGCG	C	CTGTGCGC	
3247	GAGGCGAG	CU3AU3AG	X	CGAA	ICGCGGCG		GGGCGGCG	T	CTGTGCGC	

3249	CGGAGGBC	CUGAUGAG	X	CGAA	IAGGCTCG		CGGCCCTC	T	GCCTCTCG	
3252	CCUCGGAG	CUGAUGAG	X	CGAA	ICAGAGGG		CCCTCTGC	C	CTCCGAGG	
3253	GCUCGGGA	CUGAUGAG	X	CGAA	ICAGAGGG		CCCTCTGC	C	TCGAGGGC	
3254	GGCUCGGG	CUGAUGAG	X	CGAA	ICAGAGGG		CTCTGCCC	T	CCAGAGGG	
3255	AGGCGGUC	CUGAUGAG	X	CGAA	IAGGCGAG		CTGCCCTC	C	GAGGCGGT	
3256	CACUGGAC	CUGAUGAG	X	CGAA	ICUCGGGA		TCGAGGCG	C	GTGCAATG	
3257	ACAAGGAC	CUGAUGAG	X	CGAA	ICAGCGGG		GGCGCTGC	A	GTGGCTGT	
3274	GGUCGGAC	CUGAUGAG	X	CGAA	ICAGCGGG		GCAGTGCG	T	GTGGCGAG	
3278	UGCUCGGU	CUGAUGAG	X	CGAA	ICAGCGGG		GGCTGTGC	C	AGCAAGCA	
3279	AUCUCGGG	CUGAUGAG	X	CGAA	ICAGCGGG		GGCTGTGC	A	CCAGCGAT	
3281	GAAGCGUU	CUGAUGAG	X	CGAA	IUGGCGAG		TGTGCCAC	C	AAGCATTC	
3282	GGAAUGUU	CUGAUGAG	X	CGAA	IUGGCGAG		GTGCCACG	A	AGCATTCG	
3286	AGCAAGAA	CUGAUGAG	X	CGAA	ICUGGGUG		CACCAAGC	A	TTCTGTCT	
3290	CUUGAGCA	CUGAUGAG	X	CGAA	IAAGCGUU		AAGCATTC	C	TGCTCAAG	
3291	GUUGAGCA	CUGAUGAG	X	CGAA	IAAGCGUU		AGCATTCG	T	GGTCAAGC	
3294	UCAGCGUG	CUGAUGAG	X	CGAA	ICAGGAAU		ATTCTGTG	T	CAAGCTGA	
3295	AGUCAGGU	CUGAUGAG	X	CGAA	IAGCAGGA		TCCTGTGC	A	AGCTGACT	
3300	GUAGAGUU	CUGAUGAG	X	CGAA	ICUGGAGG		GGTCAAGC	T	GACTCGAC	
3304	CGGUGUGG	CUGAUGAG	X	CGAA	IUCAGCGU		AACTCGAC	T	CGACAGCG	
3309	UGACAGGG	CUGAUGAG	X	CGAA	IUGGAGGU		GACTCGAC	A	CGGTGTCA	
3311	GGUGAGCA	CUGAUGAG	X	CGAA	IUGUGGAG		CTCGACAC	C	GTGTGAGC	
3317	CAGGUAAG	CUGAUGAG	X	CGAA	IACAGGGU		AGGTGTGC	A	CTACGTGC	
3319	GGCAGGJA	CUGAUGAG	X	CGAA	IUGAGAGG		CTGTGACG	C	TAGGTGCG	
3320	UGGCAAGU	CUGAUGAG	X	CGAA	IUGGAGAG		GTGTGACG	T	ACTGTGCA	
3327	CCAGGAGU	CUGAUGAG	X	CGAA	ICAGGJAG		CTACGTGC	C	ACTGTGGG	
3328	CCAGGAGG	CUGAUGAG	X	CGAA	ICAGGJAG		TAGGTGCG	A	CTGTGTGG	
3330	AGGCGAGG	CUGAUGAG	X	CGAA	IUGGCAAG		CGGTGACG	T	CTGTGGGT	
3332	UGAGCGCA	CUGAUGAG	X	CGAA	IAGUGGCA		TGCGACTC	C	TGGGTGCA	
3333	GUAGCGCC	CUGAUGAG	X	CGAA	IAGUGGCG		GGCGACTC	T	GGGTGCAG	
3340	GUCCUGAG	CUGAUGAG	X	CGAA	IAGCCGAG		CTGGGTGC	A	CTCGAGAG	
3342	CUGUUGUG	CUGAUGAG	X	CGAA	IUGAGCTC		GGGTGCAG	T	CAGGACAG	
3344	GGCUGGUC	CUGAUGAG	X	CGAA	IAGUGAGC		GGTCACTC	A	GGAAGGCG	
3349	GUUGGGGC	CUGAUGAG	X	CGAA	IUCUGGAG		CTCAGGAG	A	GGCCAGAG	
3352	UGCGUCUG	CUGAUGAG	X	CGAA	ICUGGUCU		AGGACAGC	C	CAGAGGCA	
3353	UGCGGUCU	CUGAUGAG	X	CGAA	IUGGUGUC		GGACAGCG	C	AGAGGCAG	
3354	GUUGGUGU	CUGAUGAG	X	CGAA	IUGGUGGU		GACAGGCG	A	GACGCAAG	
3360	GAUGAGGU	CUGAUGAG	X	CGAA	IUGGUGGG		CGAGAGCG	A	GCTGAGTC	
3363	UGGCAAGU	CUGAUGAG	X	CGAA	ICUGGCGU		GACGCAAG	T	GAGTGGGA	
3375	UGCGCGGG	CUGAUGAG	X	CGAA	ICUGGCGA		TGGGAAAG	T	CCCGGGGA	
3377	CGUCGGCG	CUGAUGAG	X	CGAA	IAGGUGCG		GGAACTGC	C	CGGGGACG	
3378	UGGUGGGC	CUGAUGAG	X	CGAA	IAGGUGGU		GAACTGCG	C	GGGGAGGA	
3390	GGGCAAGU	CUGAUGAG	X	CGAA	ICUGGCGU		GACGAGCG	T	GACTGGCG	
3394	UGCAGGGC	CUGAUGAG	X	CGAA	IUCAGGGU		AGGCTGAC	T	GCCTTGGG	
3397	GGCUGGAG	CUGAUGAG	X	CGAA	ICAGGUCAG		CTGACTGC	C	CTGAGGCG	
3398	GGGCUUGA	CUGAUGAG	X	CGAA	IGCAGUGA		TGACTGCG	C	TGGAAGCG	
3399	GGGCUUGC	CUGAUGAG	X	CGAA	IGCAGUGC		GACTGCGC	T	GGAAGGCG	
3406	UUGGUGGC	CUGAUGAG	X	CGAA	ICUGGCGAG		CTGGAGGC	C	GCAAGCAA	

3409	G3GUUGG	CU3AU3A3	X	CGAA	ICGGGCUJ		GA33CC3C	A	GCCAAACC	
3412	G333GUJ	CU3AU3A3	X	CGAA	ICUG333C		G333CA3C	C	AACCCGGC	
3413	U3CC333J	CU3AU3A3	X	CGAA	IG3U3333		C333CA3C	A	ACCC33CA	
3416	CA3U3333	CU3AU3A3	X	CGAA	I3U3333J		CA33CAAC	C	C33CACT3	
3417	GCA3U33C	CU3AU3A3	X	CGAA	I3U3333J		AGCCAAAC	C	GGCACT3C	
3421	GA3333AG	CU3AU3A3	X	CGAA	IC33333J		AA33CC3C	A	CT3333TC	
3423	CU3A333C	CU3AU3A3	X	CGAA	IU333333		C333GCA3	T	G33CT3A3	
3426	A3U3U3A3	CU3AU3A3	X	CGAA	ICAG3U3C		GGCACT3C	C	CTCAGACT	
3427	AA3U3U3A	CU3AU3A3	X	CGAA	I3CA3U33		GGCACT3C	C	TCAGACTT	
3428	GAA3U3U3	CU3AU3A3	X	CGAA	I33CA3U3		CACTG3CC	T	CAGACTTC	
3430	U33AA3U3	CU3AU3A3	X	CGAA	IA3333AG		CT3333TC	A	GA3TTCAA	
3434	GGU3U3A	CU3AU3A3	X	CGAA	I3U3A333		CCTCA3AC	T	TCAAGAC3	
3437	GAU33U3U	CU3AU3A3	X	CGAA	IAA3U3U3		CAGACTTC	A	AGACCATC	
3442	U3CA33AJ	CU3AU3A3	X	CGAA	I3U3U3AA		TTCAA3AC	C	ATCCT33A	
3443	3U3CA33A	CU3AU3A3	X	CGAA	I3U3U33A		TCAA3AAC	A	TCT333AC	
3446	U3A3U3CA	CU3AU3A3	X	CGAA	IAU33U3U		AGACCATC	C	T33AT33A	
3447	AU3A3U3C	CU3AU3A3	X	CGAA	IGA33U3C		GACCATCC	T	GGACT3AT	
3452	U333CAU3	CU3AU3A3	X	CGAA	I33CA33A		TCT333AC	T	GAT333CA	
3459	GG33333J	CU3AU3A3	X	CGAA	IGCAU3CA3		CT3AT33C	C	AGCC33CC	
3460	U3333333	CU3AU3A3	X	CGAA	IG3CAU3CA		T3AT333C	A	CC3333CA	
3462	U3U3333C	CU3AU3A3	X	CGAA	I3333CAU		AT3333AC	C	C33333CA	
3463	CU3U333C	CU3AU3A3	X	CGAA	IG3U333CA		T33333AC	C	G33333CA	
3466	U33CU3U3	CU3AU3A3	X	CGAA	IG333U33		CCAC333C	C	CAC333CA	
3467	CU333U3J	CU3AU3A3	X	CGAA	IG333U33		CAC3333C	C	ACA333CA	
3468	CU333U3C	CU3AU3A3	X	CGAA	IG33333U		AC33333C	A	CAG333CA	
3470	333CU33C	CU3AU3A3	X	CGAA	IUG33333		CC3333AC	A	G33333CC	
3473	CU333CUJ	CU3AU3A3	X	CGAA	I3U33333		CCCA333C	C	AG3333CA	
3474	U3U3333C	CU3AU3A3	X	CGAA	I3CU3333		CCCA333C	A	333333CA	
3476	CU3CU3U3	CU3AU3A3	X	CGAA	ICCU333U		AG33333C	C	GAG333CA	
3485	CU33U3U3	CU3AU3A3	X	CGAA	I3U3U333		CCGA333C	A	GAC333CA	
3489	3CU3CU33	CU3AU3A3	X	CGAA	IUCU333C		GAG333AC	A	CCA333CA	
3491	GG3CU3CU	CU3AU3A3	X	CGAA	IUG3CU3C		GGAG33AC	C	AGCA33CC	
3492	AG33CU3C	CU3AU3A3	X	CGAA	I3U3CU33		CA3AC33C	A	GCA333CT	
3495	3ACA333C	CU3AU3A3	X	CGAA	ICU3333U		ACA3333C	A	G33333TC	
3498	CG33ACAG	CU3AU3A3	X	CGAA	ICU3333U		CCA3333C	C	CT3333TC	
3499	333U3ACA	CU3AU3A3	X	CGAA	IG3U333U		CAG3333C	C	TGT3333C	
3500	GG33U3AC	CU3AU3A3	X	CGAA	IG33333U		AGCA333C	T	GTCA333C	
3504	G333333C	CU3AU3A3	X	CGAA	IA33333C		G33333TC	A	C333333C	
3508	U333333C	CU3AU3A3	X	CGAA	IG3U333A		TGT3333C	C	GG3333TA	
3513	GGAC3UAG	CU3AU3A3	X	CGAA	IG33333C		CG33333C	T	CTA333TC	
3515	U333333J	CU3AU3A3	X	CGAA	IA333333		CG3333TC	T	AG3333CA	
3521	CU3CC3U3	CU3AU3A3	X	CGAA	IA33U33A		TCTA33TC	C	CAG333AG	
3522	CC3U3CCJ	CU3AU3A3	X	CGAA	IGA33U3A		CTA333TC	C	AG3333AG	
3523	U333U3CC	CU3AU3A3	X	CGAA	IG3A333A		TA33333C	A	GG33333A	
3540	U333U3UG	CU3AU3A3	X	CGAA	IG33333C		GG33333C	C	CAC333CA	
3541	U3333U3U	CU3AU3A3	X	CGAA	IGCC333C		GG33333C	C	ACA333CA	
3542	CU3333UG	CU3AU3A3	X	CGAA	IG33333C		GG33333C	A	CAC333AG	

3544	GGCUGGG	CU3AU3AG	X	CGAA	IUGGGGG	CGGCGGAC	A	CGGAGGCC	
3546	GGGCGGJG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	CGGCGGCG	
3547	GGGCGGJU	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	AGGCGGCG	
3548	UGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	CGGCGGAC	A	GGGCGGCG	
3550	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	AGGCGGAC	C	CGGCGGCG	
3553	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	CGGCGGAC	C	GGGCGGCG	
3556	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	AGGCGGAC	A	CGGCGGCG	
3558	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGAG	
3561	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	CGGCGGAC	T	GGGCGGCG	
3569	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	AGGCGGCG	
3575	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGAG	
3576	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	AGGCGGAG	
3580	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	AGGCGGCG	
3598	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGCG	
3609	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	GGGCGGCG	
3610	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	AGGCGGAC	A	GGGCGGCG	
3617	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGAG	
3618	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	AGGCGGCG	
3626	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGAG	
3630	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	AGGCGGCG	
3636	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGAG	
3637	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	AGGCGGAG	
3649	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	AGGCGGAG	
3650	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	GGGCGGAG	
3658	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	AGGCGGAG	
3659	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	GGGCGGAG	
3672	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	CGGCGGCG	
3674	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	CGGCGGCG	
3676	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGCG	
3677	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	AGGCGGAC	T	GGGCGGCG	
3680	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	AGGCGGAC	C	GGGCGGAG	
3684	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	GGGCGGCG	
3687	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	GGGCGGCG	
3689	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	GGGCGGCG	
3690	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGCG	
3693	AGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	GGGCGGCG	
3694	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	AGGCGGCG	
3695	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	AGGCGGCG	
3697	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	A	GGGCGGCG	
3701	CGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	GGGCGGCG	
3707	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	GGGCGGCG	
3712	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	T	GGGCGGCG	
3714	GGGCGGCG	CU3AU3AG	X	CGAA	IUGGGGG	GGGCGGAC	C	AGGCGGAG	

3715	CCCU3GGG	CU3AUGAG	X	CGAA	IGA3CCGA		TGGCTCC	A	CCCCAGGG	
3717	GGCCCUUG	CU3AUGAG	X	CGAA	IUG3A3CC		GGCTCCAC	C	CCAG3GCC	
3718	UG3CCCUUG	CU3AUGAG	X	CGAA	I3UG3AGC		GGCTCCAC	C	CAG33CCA	
3719	CU33CCCU	CU3AUGAG	X	CGAA	I33UG3AG		CTCCACCC	C	A333CCAG	
3720	GCUG3CCG	CU3AUGAG	X	CGAA	I333U3GA		TCCACCCC	A	G333CAGC	
3725	GAAAA3CU	CU3AUGAG	X	CGAA	I0CCU33G		CCCA333C	C	AG3TTTTC	
3726	33AAAA3C	CU3AUGAG	X	CGAA	I300CU3G		CCA3333C	A	GCTTTTCC	
3729	U3A33AAA	CU3AUGAG	X	CGAA	I0U333CC		GG33CAGC	T	TTCTCTCA	
3734	CCU33U3A	CU3AUGAG	X	CGAA	IAAAA3CU		AGCTTTTC	C	CA33CAG3	
3735	UCCU33UG	CU3AUGAG	X	CGAA	IGAAAA3C		GCTTTTCC	T	CAC3AG3A	
3737	3CU3CU3G	CU3AUGAG	X	CGAA	IA33AAAA		TTTTCTTC	A	CA333AGC	
3739	333CU3CU	CU3AUGAG	X	CGAA	IUG333AA		TTCTCTAC	C	A33A30CC	
3740	CC33CUCC	CU3AUGAG	X	CGAA	I3U3AG3A		TCTCTACC	A	G3A330CC	
3745	33AA3CCG	CU3AUGAG	X	CGAA	I0UCCUGG		CCAG3AGC	C	C33CTTCC	
3747	UG3AA3CC	CU3AUGAG	X	CGAA	I3CUCCUG		CA33A3CC	C	G3CTTCCA	
3751	33AGU33A	CU3AUGAG	X	CGAA	I03333CU		AGCC333C	T	TCCACTCC	
3754	UG333AGU	CU3AUGAG	X	CGAA	IAA3CC3G		CC33CTTC	C	ATCTCCCA	
3755	3UG333AG	CU3AUGAG	X	CGAA	I3AA3CCG		CC3CTTCC	A	CTCCCCAC	
3757	AUG3333G	CU3AUGAG	X	CGAA	IUG33AA3C		GCTTCCAC	T	CCCCACAT	
3759	CUAUG3UG	CU3AUGAG	X	CGAA	IAUG33AA		TTCCACTC	C	CA3ATA3G	
3760	CCUAUGUG	CU3AUGAG	X	CGAA	IGA3UG3A		TCCACTCC	C	CACATA3G	
3761	UCCUAUGU	CU3AUGAG	X	CGAA	I3GA3UGG		CCACTCCC	C	ACATA33A	
3762	UUCUAUG	CU3AUGAG	X	CGAA	I3G3AGUG		CACTCCC	A	CATA33AA	
3764	UAUUCUA	CU3AUGAG	X	CGAA	IUG333AG		CTCCCCAC	A	TAG3AATA	
3770	CU3333AU	CU3AUGAG	X	CGAA	IACUAUUC		GAATA3TC	C	ATCCCCAG	
3777	UCU3333A	CU3AUGAG	X	CGAA	I3AUUAUU		AATA3TCC	A	TCCCCAGA	
3780	3AAUCUGG	CU3AUGAG	X	CGAA	IAUG33AU		AGTCCATC	C	CCAGATTG	
3781	CGAAUCUG	CU3AUGAG	X	CGAA	IGAUG3AC		GTCATCCC	C	CAGATT3G	
3782	GC3AAUCU	CU3AUGAG	X	CGAA	IGGAUG3A		TCCATCCC	C	AGATTG3C	
3783	33CGAAUC	CU3AUGAG	X	CGAA	I333AU3G		CCATCCCC	A	GATTG3CC	
3791	UGAA3AAU	CU3AUGAG	X	CGAA	I03AAUCU		AGATTG3C	C	ATT3TTCA	
3792	3UGAA3AA	CU3AUGAG	X	CGAA	I333AAUC		GATTG3CC	A	TP3TTCAC	
3793	GC3AG3GG	CU3AUGAG	X	CGAA	IAA3AAUG		CATT3TTC	A	CCCCTG3C	
3801	333CGAGG	CU3AUGAG	X	CGAA	IUGAA3AA		TT3TTCAC	C	CCTC30CC	
3802	A333CGAG	CU3AUGAG	X	CGAA	IGUGAA3A		T3TT3ACC	C	CTC3CCCT	
3803	CA33GCGA	CU3AUGAG	X	CGAA	IG3UG3AAC		GTTCA0CC	C	TCC00CTG	
3804	GCAG33GG	CU3AUGAG	X	CGAA	I333UG3AA		TTCA00CC	T	CC00CTGG	
3808	GA333CAG	CU3AUGAG	X	CGAA	I03AG3GG		CCCTTG3C	C	CTG00CTC	
3809	33AG33CA	CU3AUGAG	X	CGAA	I033A3GG		CCCTG3CC	C	TG00CTCC	
3810	A33AG3GC	CU3AUGAG	X	CGAA	I33CGA3G		CCTG30CC	T	G03CTCCT	
3813	CAAA3GAG	CU3AUGAG	X	CGAA	I0AG33CG		CG00CTGC	C	CT03TTTG	
3814	3CAAAG3A	CU3AUGAG	X	CGAA	I3CAG33C		G00CTG0C	C	T0CTTT3C	
3815	GGCAAA3G	CU3AUGAG	X	CGAA	I3GCAG3G		CCCTG00C	T	CCTTTG0C	
3817	AA3GC3AA	CU3AUGAG	X	CGAA	IA333CAG		CTG00CTC	C	TT33CTTT	
3818	3AA3GC3A	CU3AUGAG	X	CGAA	IGA333CA		TG00CTCC	T	TT33CTTC	
3823	GG3UG3AA	CU3AUGAG	X	CGAA	ICAAAG3A		TCTTTTGC	C	TTCAC0CC	
3824	GG3UG3AA	CU3AUGAG	X	CGAA	IGCAAA3G		CTTTT3CC	T	TCCAC0CC	

3927	GUGGGGUGU	CUGAUGAG	X	CGAA	IAAGGCAA		TTGCCCTT	C	ACCCCAAC
3928	GGUGGGGG	CUGAUGAG	X	CGAA	IAGAGGCA		TGCCCTTC	A	CCCCCAAC
3930	AUGGUGGG	CUGAUGAG	X	CGAA	IUGGAAAG		CGTCCAC	C	CCCAACAT
3931	GAUGGUGG	CUGAUGAG	X	CGAA	IUGGAAAG		CTGCCAC	C	CCCAACAT
3932	GGAUGGUG	CUGAUGAG	X	CGAA	IUGGAAAG		TGCCACCC	C	CAACATCC
3933	UGGAUGGU	CUGAUGAG	X	CGAA	IUGGAAAG		TGCCACCC	C	CAACATCC
3934	GUUGAUGG	CUGAUGAG	X	CGAA	IUGGAAAG		CGACCCCC	A	CCATCCAG
3936	AGGUGGAG	CUGAUGAG	X	CGAA	IUGGAAAG		AGCCCCAC	C	ATCCAGGT
3937	CAGGUGGA	CUGAUGAG	X	CGAA	IUGGAAAG		CCCCACCC	A	TCCAGGTG
3940	GUCCAGGU	CUGAUGAG	X	CGAA	IUGGAAAG		CCACCATC	C	AGGTGGAAG
3941	UGCCAGGC	CUGAUGAG	X	CGAA	IUGGAAAG		CACCATCC	A	GGTGGAGA
3951	GUUGUAG	CUGAUGAG	X	CGAA	IUGGAAAG		GTGGAGAC	C	CTGAGAAAG
3952	GUUGUGA	CUGAUGAG	X	CGAA	IUGGAAAG		TGGAGACC	C	TGAGAAAG
3953	UGGUUGUG	CUGAUGAG	X	CGAA	IUGGAAAG		GGAGACCC	T	GAAGAAAG
3963	GUUGGAG	CUGAUGAG	X	CGAA	IUGGAAAG		AGAAAGAC	C	CTGGAGGC
3964	AGGUUGGA	CUGAUGAG	X	CGAA	IUGGAAAG		GAAAGACC	C	TGGAGGCT
3965	GAGGUUGG	CUGAUGAG	X	CGAA	IUGGAAAG		AAAGACCC	T	GGAGGCTC
3972	AUUGGAG	CUGAUGAG	X	CGAA	IUGGAAAG		CTGGAGGC	T	CTGGGAAT
3974	AAAUUGGG	CUGAUGAG	X	CGAA	IUGGAAAG		GGAGGCTC	T	GGGAATTT
3991	ACAGGUUG	CUGAUGAG	X	CGAA	IUGGAAAG		GGAGTGAC	C	AAAGGTGT
3992	CACAGGUU	CUGAUGAG	X	CGAA	IUGGAAAG		GAGTGACC	A	AAAGGTGT
3993	GUUGUAG	CUGAUGAG	X	CGAA	IUGGAAAG		AGGTGTGC	C	CTGTACAC
3993	UGUGUAGA	CUGAUGAG	X	CGAA	IUGGAAAG		GTGTGTGC	C	TGTACACA
3994	GUUGUGAG	CUGAUGAG	X	CGAA	IUGGAAAG		GTGTGTGC	T	GTACACAG
3999	GUUGGUUG	CUGAUGAG	X	CGAA	IUGGAAAG		CCGTGTAC	A	CAGGCGAG
3999	UGGUUGGU	CUGAUGAG	X	CGAA	IUGGAAAG		CTGTACAC	A	GGGAGAGA
3999	AGGUUGAG	CUGAUGAG	X	CGAA	IUGGAAAG		GGGAGACC	C	CTGCACCT
3999	CAGGUUGA	CUGAUGAG	X	CGAA	IUGGAAAG		CGAGGACC	C	TGCACCTG
3999	CCAGGUUG	CUGAUGAG	X	CGAA	IUGGAAAG		GAAGGACC	T	GCACCTGG
3999	CAUGGAGG	CUGAUGAG	X	CGAA	IUGGAAAG		GAACCTGC	A	CTGGGATG
3999	CCCAUGGA	CUGAUGAG	X	CGAA	IUGGAAAG		CCCTGCAC	C	TGGATGGG
3999	CCCAUGGC	CUGAUGAG	X	CGAA	IUGGAAAG		CCCTGCAC	T	GGATGGGG
3941	AGCCAGAG	CUGAUGAG	X	CGAA	IAGCCGCA		TGGGGGTC	C	CTGTGGGT
3942	GAACCAAG	CUGAUGAG	X	CGAA	IAGCCGCA		GGGGGTC	C	GTGGGGTC
3943	UGAACCAAG	CUGAUGAG	X	CGAA	IAGCCGCA		GGGGGTC	T	GTGGGGTC
3951	CCCAAAUJ	CUGAUGAG	X	CGAA	IAGCCGCA		TGTGGGTC	A	AATTGGGG
3968	ACUCCAGC	CUGAUGAG	X	CGAA	IAGCCGCA		GGAGGTGC	T	GTGGGAGT
3984	AUAUAUUC	CUGAUGAG	X	CGAA	IUAUUUJA		TAAAATAC	T	GAATATAT
4002	UUCAAAAU	CUGAUGAG	X	CGAA	IAAAAAAU		AGTTTTTC	A	GTTTTGAA

Stem Length = 8. Core Sequence = CUGAUGAG X CGAA (X = GCCGUUAGGC or other stem II sequence and length (greater than or equal to 2 base-pairs)). I = Inosine nucleotide

Seq1 = TERT (Homo sapiens telomerase reverse transcriptase (TERT) mRNA, 4015 bp); Nakamura *et al.*, Science 277 (5328), 955-959 (1997)

Table V: Human telomerase reverse transcriptase (TERT) G-Cleaver Ribozyme and Target Sequence

nt. Position	Substrate Sequence	Seq ID Nos	Ribozyme Sequence	Seq ID Nos
16	GUUUGUGUUCU G CUUGG		CUUAG UGAUUGAUUGCAUUAUUGUGUG AGGACGCGAGC	
19	GGUUCUUGCU G CGCAC		GUUGUG UGAUUGGAUUGCAUUAUUGUGUG AGUAGGACGC	
21	GUUCUGUGUG G CAGGU		AGUGUG UGAUUGGAUUGCAUUAUUGUGUG GUAAGCAGGAC	
53	GUCCACUCCU G CGAUG		CAUUG UGAUUGGAUUGCAUUAUUGUGUG GGGGUGGCGC	
55	CCACCCCCCG G AUGCC		GUUAU UGAUUGGAUUGCAUUAUUGUGUG GUGGGGUGUG	
58	CCCCCGGGAU G CCGCG		CGCGG UGAUUGGAUUGCAUUAUGCGCG AUCGCGGGGG	
61	CGUGAUGUG G CGGCG		CGGUG UGAUUGGAUUGCAUUAUGCGUG GGGAUUGUGG	
63	GGGAUGCGCG G CGCUC		GAUGUG UGAUUGGAUUGCAUUAUGCGUG GCGGCAUCCG	
65	GAUCCCGGUG G CUUCC		GUUAUG UGAUUGGAUUGCAUUAUGUGUG GCGUGGCAUC	
72	CGCGUCCCG G CUUUG		GUUAUG UGAUUGGAUUGCAUUAUGUGUG GUUAUUGUG	
75	GUUUCUUGCU G CGGAG		GUUAUG UGAUUGGAUUGCAUUAUGUGUG AGUGGGGAGC	
78	CCCCGUGUG G AGUUG		GUUAUG UGAUUGGAUUGCAUUAUGUGUG GUUAUGUGUG	
85	GCCGAGCGGU G CGUUC		GUUAUG UGAUUGGAUUGCAUUAUGUGUG AGUGGUGUG	
87	CGAGCGGUG G CUUCC		GUUAUG UGAUUGGAUUGCAUUAUGUGUG GUUAUGUGUG	
94	UGUGCUUCU G CUUGG		GUUAUG UGAUUGGAUUGCAUUAUGUGUG AGGAGGCGCA	
97	GUCCCGUGU G CGCAG		CUUGUG UGAUUGGAUUGCAUUAUGUGUG AGCAGGAGC	
99	UCCCUUGUG G CAGCC		GUUGUG UGAUUGGAUUGCAUUAUGUGUG GUUAUGGAG	
111	AGCCAUUAC G CGAGG		CUUGUG UGAUUGGAUUGCAUUAUGUGUG GUUAUGGUG	
113	CCACUACCG G AGGUG		CAUUG UGAUUGGAUUGCAUUAUGUGUG GGGAUUGUG	
118	ACCGGAGGU G CUGCC		GGCAG UGAUUGGAUUGCAUUAUGUGUG ACUUGUGUG	
121	GGAGGUGUG G CUUCC		AGUGUG UGAUUGGAUUGCAUUAUGUGUG AGUACUCCG	
124	AGGUGUGUG G CUUGG		GUUAUG UGAUUGGAUUGCAUUAUGUGUG GUUAUGUG	
139	CCACUUGUG G CGGUG		GUUGUG UGAUUGGAUUGCAUUAUGUGUG AGGAGGUG	
144	UUCGUGGCG G CUGUG		CGGAG UGAUUGGAUUGCAUUAUGUGUG GGGAGGAG	
172	GGGUGUGUG G CAGUG		GUUGUG UGAUUGGAUUGCAUUAUGUGUG AGGAGGUG	
177	CUUGUGGAG G CGGUG		CUUGUG UGAUUGGAUUGCAUUAUGUGUG GUUAUGGAG	
198	GGGCGUUCG G CGGCG		GGGUG UGAUUGGAUUGCAUUAUGUGUG GGGAGGUG	
200	GGGUGUGUG G CGGUG		GUUAUG UGAUUGGAUUGCAUUAUGUGUG GGGAGGUG	

202	CTTTCTCTTAC G CTCTAT		ACCTAG UGAUGGCAUUAUGGCG GCGCGGAAG	
216	GUAGGCTAGT G CCTTGG		CTTAG UGAUGGCAUUAUGGCG ACTUGGCCAC	
223	AGUGGCTUGGU G UGGCGU		ACGCA UGAUGGCAUUAUGGCG ACCAGGCACU	
225	UAGCTUGGUU G CGUGG		GTATG UGAUGGCAUUAUGGCG ATACCAAGCA	
229	UGGUGUGGUU G CCTTGA		CTAGG UGAUGGCAUUAUGGCG ACCGACACCA	
239	GCCTUGGGAC G CAAGG		CGGUG UGAUGGCAUUAUGGCG GUCCGAGGGC	
247	ACGCAAGGCG G CCGCC		GGGGG UGAUGGCAUUAUGGCG GCGCGUGCGU	
254	GCGGCGCGCG G CGGCT		GGCGG UGAUGGCAUUAUGGCG GGGGGGCGC	
257	GCGCGCGCGG G CCGCC		GGGGG UGAUGGCAUUAUGGCG GCGGGGGCG	
270	CCCTCCCTCC G CCAAG		CTTGG UGAUGGCAUUAUGGCG GGAAGGAGG	
277	UCCGCCAGGU G UCTTGG		CAAGG UGAUGGCAUUAUGGCG ACCUGGCGGA	
282	CAAGUGUGGU G CCGGA		UTAGG UGAUGGCAUUAUGGCG AGGATACCTG	
286	UGUCCTUGCGU G AAGGA		UCCUU UGAUGGCAUUAUGGCG AAGCAAGACA	
303	CTGAGUGCGG G AGUGT		GAATT UGAUGGCAUUAUGGCG GAGGATCTAG	
307	TGGGCTGAGU G CTGGCA		UGGAG UGAUGGCAUUAUGGCG ACTTGGGCGA	
310	CTCGAGUGGU G CAGAG		CTTGG UGAUGGCAUUAUGGCG AGCACTCGGG	
319	UGCAGAGGCU G UGCGA		UCCGA UGAUGGCAUUAUGGCG AGCTTCTGCA	
321	CAAGAGGUGU G CGAGC		GTGGG UGAUGGCAUUAUGGCG ACAGCCCTCG	
323	GAGGCTUGGC G AGCGC		GGGCT UGAUGGCAUUAUGGCG GCAAGCCCTC	
327	CUGUGUGAGC G UGCGG		CGCGG UGAUGGCAUUAUGGCG GTTUGGCACAG	
332	CTAGCTGAGC G CGAAG		CTTUG UGAUGGCAUUAUGGCG GCGCGGCTCG	
334	AGCTGCGGCG G AAGGA		UUCUU UGAUGGCAUUAUGGCG GCGCGGCGCU	
343	CGAAGAACGU G CTGGC		GCCAG UGAUGGCAUUAUGGCG AGCTTCTTGG	
359	CTTCTGCTUG G CGTUG		CAGCG UGAUGGCAUUAUGGCG GAAAGCGAAG	
361	TTGCTTUGGC G CTGGU		AGGAG UGAUGGCAUUAUGGCG GCGAAGCTGA	
364	GCTUCGCGGU G CUGGA		UCCAG UGAUGGCAUUAUGGCG AAGCGGAAGC	
378	GACGGGCGCG G CGGGG		CCCGG UGAUGGCAUUAUGGCG GGGCGCCGUC	
392	GGGCTCTCTC G AGGCT		GGCTU UGAUGGCAUUAUGGCG GGGGGGGCGC	
412	CCAGCGAGGU G CGGAG		CTGGG UGAUGGCAUUAUGGCG ACCCTTGGGG	
414	ACCAGCGUGC G CAGCT		AGCTT UGAUGGCAUUAUGGCG GATGCTTGGU	
424	GCAGCTAACU G CCGGA		UUGGG UGAUGGCAUUAUGGCG AGGTAAGTGG	

436	CTAATAGAGG G AAGGA		TTGATG TGAAGGCAAGCAUAGTGGG AATGGATGG	
440	CAATGATAGG G AAGCA		TTGGAG TGAAGGCAAGCAUAGTGGG GATGACGGGG	
443	GGTGAAGAGG G CAGTA		CAGTGG TGAAGGCAAGCAUAGTGGG GTGGATGACC	
448	CTGATGACAG G GAGGG		CGGGGG TGAAGGCAAGCAUAGTGGG AGTGGCGTGG	
472	CTGAGGAGAGG G CTGGCT		AGTAGG TGAAGGCAAGCAUAGTGGG AGTGGCCACG	
475	GGAGGCTGGG G CTGGGG		CGTAGG TGAAGGCAAGCAUAGTGGG AGTAGGCGGCG	
478	GAGGCTGGG G CGGGG		CGGGGG TGAAGGCAAGCAUAGTGGG AGTAGGCAAGCG	
480	CTGCTGGAGG G CGGGG		CGGGGG TGAAGGCAAGCAUAGTGGG GTAGGCAAGGAG	
483	CTGCTGGAGG G CGGGG		CGTAGG TGAAGGCAAGCAUAGTGGG GATGGTAGGAG	
491	CGAGGAGAGG G AAGGAC		GTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
494	CGAGGAGAGG G AAGGAG		CAGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
499	GGAGGAGAGG G CTGGAG		AAGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGCG	
511	UGAGGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGCG	
519	CTGAGGAGAGG G CTGGAG		CGTAGG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
522	CTGAGGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGAG	
524	GGAGGAGAGG G CTGGAG		GAGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
526	CATGAGGAGG G CTGGAG		AAGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
533	CGAGGAGAGG G GTGGAG		CAGGAG TGAAGGCAAGCAUAGTGGG AAGGAGGAGG	
535	CTGAGGAGAGG G CTGGAG		AAGGAG TGAAGGCAAGCAUAGTGGG AAGGAGGAGG	
552	GTGGAGGAGG G CTGGAG		AAGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGAG	
554	UCCAGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
565	CTGAGGAGAGG G CTGGAG		CTGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGAG	
567	UCCAGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGAG	
574	GTGGAGGAGG G CTGGAG		AGTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
577	GGAGGAGAGG G CTGGAG		UCCAGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
580	GGAGGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGAGG	
593	CGAGGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
596	GTGGAGGAGG G CTGGAG		AGTGGAG TGAAGGCAAGCAUAGTGGG AGTGGAGGAGG	
616	CGAGGAGAGG G CTGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
623	CGAGGAGAGG G CTGGAG		AGTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	
636	AGTGGAGAGG G AAGGAG		GTGGAG TGAAGGCAAGCAUAGTGGG GTGGAGGAGG	

651	CAUCUGGGAU G CGAAC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAGC	
653	UCUGGGAU G AACGG		CCGUU UGAUGGCAUGCAUAUGCGCG GCAUCCAGAG	
703	UCUUGGACU G CCGAC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
716	AGUCCCGGCU G CGAGG		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
718	CCUUGGUGUG G AGGAG		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
726	GAUUGGAGU G CGAGG		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
737	CGGUGGAGU G CGAGC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
744	AGUUGGAGU G AGGUC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
751	GUUUGGAGU G CGGUU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
757	GUUUGGAGU G CGGAA		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
779	CAUUGGUGUG G CUGCC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
782	GUUUGGUGUG G CUGCC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
788	GUUUGGUGUG G AGCCG		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
802	CGGAGCGGAC G CCGGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
841	CGGAGCGGAC G CCGGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
856	CGGAGCGGAC G CCGGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
854	UGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
867	CGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
869	UGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
874	UCUGUGUGUG G UCAGC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
881	GGUGUGUGUG G UCAGC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
890	UGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
893	CGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
917	UUUGGAGGUG G CGGUC		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
919	UGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
931	UCUUGGAGU G CGGAA		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
933	UCUUGGAGU G CGGAA		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
957	UCCUGGAGU G CGGAA		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
968	CGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
988	CGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	
1012	CGGAGCGGAG G ACCGU		GUUUG UGAUUGCAUUGCAUAUUGUGUG AUUCCAGAG	

1017	GACACGCCUU G UCCCC		GGGGA UGAUGGCAUGCAUAUGCGCG AAGCGUGUC	
1027	GUCCCCCGGU G UACGC		GCQUA UGAUUGGCAUGCAUAUGCGCG ACCGGGGAC	
1031	CCCGGUGUAC G CCGAG		CUCCG UGAUUGGCAUGCAUAUGCGCG GUACACCGGG	
1034	GGUGUACGCC G AGACC		GGUCU UGAUUGGCAUGCAUAUGCGCG GCGUACACC	
1064	CUCCUCAGGC G ACAAG		CUUGU UGAUUGGCAUGCAUAUGCGCG GCCUGAGGAG	
1078	AGGAGCAGCU G CGGCC		GGCCG UGAUUGGCAUGCAUAUGCGCG AGCUUCUCU	
1105	UCAGCUCUCU G AGGCC		GGCCU UGAUUGGCAUGCAUAUGCGCG AGAGAGCUGA	
1117	GGCCAGCCU G ACUGG		CCAGU UGAUUGGCAUGCAUAUGCGCG AGGCUGGGCC	
1124	CCUGACUGGC G CUCCG		CCGAG UGAUUGGCAUGCAUAUGCGCG GCCAGUCAGG	
1171	GGCCCUGGAU G CCAGG		CCUGG UGAUUGGCAUGCAUAUGCGCG AUCCAGGGCC	
1185	GGGACUCCCC G CAGGU		ACCUG UGAUUGGCAUGCAUAUGCGCG GGGAGUCCC	
1192	CCCGCAGGU G CCCCC		CGGGG UGAUUGGCAUGCAUAUGCGCG AACUCGGGG	
1197	AGGUUGCCCC G CCUGC		GCAGG UGAUUGGCAUGCAUAUGCGCG GGGCAACCU	
1201	UGCCCCGCCU G CCCCC		UGGGG UGAUUGGCAUGCAUAUGCGCG AGCGGGGCA	
1209	CUGCCCCAGC G CUACU		AGUAG UGAUUGGCAUGCAUAUGCGCG GCUGGGCCAG	
1222	ACUGGCAGAU G CGGCC		GGCCG UGAUUGGCAUGCAUAUGCGCG AUUUGCCAGU	
1231	UGCGGCCCCU G UUUUU		AGAAA UGAUUGGCAUGCAUAUGCGCG AGGGGCCGCA	
1243	UUUCGGAGCU G CUUGG		CCAAG UGAUUGGCAUGCAUAUGCGCG AGCUCCAGAA	
1256	UGGGAACCCAC G CGGAG		CUGGG UGAUUGGCAUGCAUAUGCGCG GUUGUCCCA	
1258	GGAAACCACG G CAGUG		CACUG UGAUUGGCAUGCAUAUGCGCG GCGUGGUCC	
1263	CACGCGCAGU G CCCCC		AGGGG UGAUUGGCAUGCAUAUGCGCG ACUGCGCGUG	
1276	CCUACGGGGU G CUCCU		AGGAG UGAUUGGCAUGCAUAUGCGCG ACCCCGUAAG	
1288	UCCUGAAGAG G CACUG		CAGUG UGAUUGGCAUGCAUAUGCGCG GUCUUGAGGA	
1293	AAGACGCACU G CCCCC		GCGGG UGAUUGGCAUGCAUAUGCGCG AGUGGUCUU	
1297	CGCACUGCCC G CUUCG		CGCAG UGAUUGGCAUGCAUAUGCGCG GGGCAGUGCG	
1300	ACUGCCCCGU G CGAGC		GCUCG UGAUUGGCAUGCAUAUGCGCG AGCGGGCAGU	
1302	UGCCCGACUG G AGCUG		CAGCU UGAUUGGCAUGCAUAUGCGCG GCAGCGGGCA	
1307	GCUGCGAGCU G CGGUC		GACCG UGAUUGGCAUGCAUAUGCGCG AGCUCGACG	
1328	AGCAGCCGGU G UUCUU		ACAGA UGAUUGGCAUGCAUAUGCGCG ACCGGCUCU	
1332	GCCGGUGUCU G UGCCC		GGGCA UGAUUGGCAUGCAUAUGCGCG AGACACCGGC	
1334	CGGUGUCUAG G CCGGG		CGGGG UGAUUGGCAUGCAUAUGCGCG ACAGACACCG	

1358	CCAGGGCUCU G UGGCG		CGCCA UGAUGGCAUGCACAUAUGCGCG AGAGCCUCUG	
1370	GGU33CCCCG G AGGAG		CUCCU UGAUGGCAU3CAUAU3CGCG G3333CCCGC	
1395	GACCCCCGUC G CUC33		CCAG3 UGAU33CAU3CAUAU3CGCG GAC3GGGGUC	
1402	GUCGCCUGGU G CAGCU		AGCUG UGAUGGCAUGCACAUAUGCGCG ACCAGCGGAC	
1408	UG3UGCAG3U G CUCCG		CG3AG UGAU33CAU3CAUAU3CGCG AGCUGCACCA	
1413	CAGCUGCUCC G CCAGC		GCU3G UGAUGGCAU3CAUAU3CGCG GAGCAGCUG	
1438	CCUGGCAGGU G UACGG		CCGUA UGAUGGCAU3CAUAU3CGCG ACCU3GCAGG	
1450	ACG3CUUC3U G CCG3C		GCCCC UGAU33CAU3CAUAU3CGCG ACCGAGCCGU	
1458	GUGCG33CCU G CCUGC		GCA33 UGAU33CAU3CAUAU3CGCG A33CCCGCAC	
1462	GG3CCUGCCU G CGCCG		CG3CG UGAUGGCAU3CAUAU3CGCG AG3CAGGCCC	
1464	GCCUGCCU3C G CC33C		GCCCC UGAU33CAU3CAUAU3CGCG GCA33CA33C	
1474	GCCGGCUGGU G CCCCC		G3333 UGAU33CAU3CAUAU3CGCG ACCAGCCGGC	
1505	CAG3CACAAAC G AAC3C		GCGUU UGAUGGCAU3CAUAU3CGCG GUUGUGCCUG	
1509	CACA3GAAAC G CCGCU		AGCG3 UGAUGGCAU3CAUAU3CGCG GUUCGU33G	
1512	AAC3AACGCC G CUUCC		G3AAG UGAU33CAU3CAUAU3CGCG G3CGUUCGUU	
1556	G3GGAAGCAU G CCAAG		CUUGG UGAUGGCAU3CAUAU3CGCG AUGCUUCCCC	
1567	CCAAGCUCUC G CUGCA		UGCAG UGAUGGCAU3CAUAU3CGCG GAGAGCUCUG	
1570	AGCUCUCGCU G CAGGA		UCCUG UGAUGGCAU3CAUAU3CGCG AGCGAGAGCU	
1579	UG3A33A3CU G AC3UG		CA33U UGAU33CAU3CAUAU3CGCG AGCUCUGCA	
1591	CGUGAAGAU G AGCGU		AC3CU UGAUGGCAU3CAUAU3CGCG AUUCUCCAG	
1597	AGAU3AGCGU G CG33A		UCCCG UGAUGGCAU3CAUAU3CGCG ACGCUCAUUCU	
1605	GU3GG3ACU G CGCUU		AAGCG UGAUGGCAU3CAUAU3CGCG AGUCCG3CAC	
1607	GCG33ACUGC G CUG3G		CCAAG UGAUGGCAU3CAUAU3CGCG GCA3UC3CGC	
1615	GCGCUG3CU G CGCAG		CU3CG UGAUGGCAU3CAUAU3CGCG AGCCA3CGC	
1617	GCUUGCUGC G CAG3A		UCCUG UGAU33CAU3CAUAU3CGCG GCA3CCAGC	
1638	G3G3UGGCU G UGUUC		GAA3A UGAUGGCAU3CAUAU3CGCG AGCCAA3CCC	
1640	G3UG33CUGU G UUC3G		CG3AA UGAUGGCAU3CAUAU3CGCG ACA3CCAA3C	
1649	UGU3CCG3CC G CAGAG		CUCCG UGAU33CAU3CAUAU3CGCG G3CC33AACA	
1663	AGCA3CC3CU G CGUGA		UCACG UGAUGGCAU3CAUAU3CGCG AGACGGUGCU	
1667	CC3UCUGCGU G AGGAG		CUCCU UGAU33CAU3CAUAU3CGCG ACCGAGAC3G	
1690	CCAAGUUCU G CACUG		CA3UG UGAUGGCAU3CAUAU3CGCG A33AA3U3UG	

1699	UGCACUUGGU G AUGAG		CUCAU UGAUGGCAUGGACUAUGGCGG AGCCAGUGCA	
1702	ACUUGCUUUAU G AGUUG		ACAUU UGAUGGCAUGGACUAUGGCGG AUCCAGGCAU	
1706	GCUGAUGAGU G UGUAC		GUACA UGAUGGCAUGGACUAUGGCGG ACUCAUACAG	
1708	UGAUGAGUGU G UACGU		ACGUA UGAUGGCAUGGACUAUGGCGG ACACUCAUCA	
1718	GUACGUUGGU G AGCUG		CAGCU UGAUGGCAUGGACUAUGGCGG GACGAGGUAC	
1723	UGCUGGAGCU G CUCAG		CUGAG UGAUGGCAUGGACUAUGGCGG AGCUGACAGA	
1742	UUUCUUUUUAU G UCACG		CGUGA UGAUGGCAUGGACUAUGGCGG AUAAAAGAAA	
1793	CCGGAGAAGU G UCUGG		CCAGA UGAUGGCAUGGACUAUGGCGG ACUCUUCGG	
1807	GGAGCAAGUU G CAAAG		CUDUG UGAUGGCAUGGACUAUGGCGG AACUUGCUC	
1834	GACAGCACTTU G AAGAG		CUCTTU UGAUGGCAUGGACUAUGGCGG AAGUACTTUC	
1843	UGAAGAGGU G CAGCU		AGCUG UGAUGGCAUGGACUAUGGCGG ACCUCUUCA	
1849	GGUGCAGCU G CGGGA		UCCCG UGAUGGCAUGGACUAUGGCGG AGCUGACACC	
1858	UGCGGGAGCU G UCAGA		UCCGA UGAUGGCAUGGACUAUGGCGG AGCUCGCCGA	
1898	AGCCAGGCCG G CCCUG		CAGGG UGAUGGCAUGGACUAUGGCGG GGGCCUGGCU	
1903	GGCCCGCCCU G CUGAC		GUUAG UGAUGGCAUGGACUAUGGCGG AGGCGCGGCG	
1906	CCGCCCUUGU G AGGUC		GACCU UGAUGGCAUGGACUAUGGCGG AGCAGGGCGG	
1920	UCCAGACUCC G CUUCA		UGAAG UGAUGGCAUGGACUAUGGCGG GGAUCUUGGA	
1937	CCCCAAGCCU G ACGGG		CCCCU UGAUGGCAUGGACUAUGGCGG AGGCUUGGG	
1945	CUGACGGGU G CGGCC		GGCCG UGAUGGCAUGGACUAUGGCGG AGCCCGUCAG	
1951	GGCUGCGGCC G AUUGU		ACAAU UGAUGGCAUGGACUAUGGCGG GGCUCAGCC	
1955	GGGCCCGAUU G UGAC		GUUCA UGAUGGCAUGGACUAUGGCGG AAUCGGCCGC	
1957	GGCCGAUUUU G AACAU		AUGUU UGAUGGCAUGGACUAUGGCGG ACAAUCGGCC	
1992	AGAACGUUCC G CAGAG		CUCUG UGAUGGCAUGGACUAUGGCGG GAAACGUUCU	
2009	AAAGAGGGCC G AGCGU		ACGCU UGAUGGCAUGGACUAUGGCGG GGCUCUCUU	
2023	GUUUCACCTUC G AGGGU		ACCTU UGAUGGCAUGGACUAUGGCGG GAGGUAGAG	
2029	CCUCGAGGGU G AAGGC		GCCUU UGAUGGCAUGGACUAUGGCGG ACCUCGAGG	
2038	UGAAGGCACU G UUCAG		CUGAA UGAUGGCAUGGACUAUGGCGG AGUGCUCUCA	
2047	UGUUCAGCGU G CUCAA		UUGAG UGAUGGCAUGGACUAUGGCGG ACGCUGAACA	
2057	GUUCAACUAC G AGCGG		CUUGU UGAUGGCAUGGACUAUGGCGG GUAGUUGAGC	
2065	ACGAGCGGGC G CGGCG		CGCCG UGAUGGCAUGGACUAUGGCGG GCCCGUCUGU	
2070	CAAGCGCGGU G CCGCG		CGAGG UGAUGGCAUGGACUAUGGCGG GCGCGGCCCG	

2087	CCUCCUUGGC G CCUCU		AGAGG UGAUGCAUGCACAUGCGCG GCCCAGAGG	
2093	GGGCGCCUCU G UGCG		CAACA UGAUGCAUGCACAUGCGCG AGAGGCGCC	
2095	GGGCTTCTGU G CTUGG		CCGAG UGAUGGCAUGCACAUGCGCG ACAGAGCGCG	
2108	GGGCCUGGAC G AUAUC		GAUAU UGAUGGCAUGCACAUGCGCG GUCCAGGCC	
2127	AGGGCCUGGC G CACCU		AGGUG UGAUGGCAUGCACAUGCGCG GCCAGGCCU	
2137	GCAACCUCCU G CUGCG		CCGAG UGAUGGCAUGCACAUGCGCG ACGAAGGUC	
2140	CCUUCGUGCU G CGUGU		ACACG UGAUGGCAUGCACAUGCGCG AGCAGAGAG	
2144	CGUCUGCGU G UGCGG		CCGCA UGAUGGCAUGCACAUGCGCG ACGCAGCAG	
2146	UGCUGCGUGU G CGGGC		GCCCG UGAUGGCAUGCACAUGCGCG ACACGACGA	
2161	CCGAGGACCC G CCGCC		GCGCG UGAUGGCAUGCACAUGCGCG GGGUCCTUGG	
2164	AGGACCCGCC G CUUGA		UCAAG UGAUGGCAUGCACAUGCGCG GGCUGUCU	
2168	CCCGCCGCCU G AGCUG		CAGCU UGAUGGCAUGCACAUGCGCG AGGCGCGGG	
2173	CGCCUGAGCU G UACUU		AAGUA UGAUGGCAUGCACAUGCGCG AGCUCAGCG	
2180	GCUGUACUUU G UCAAG		CUUGA UGAUGGCAUGCACAUGCGCG AAAGUACAGC	
2192	CAAGGUGAU G UGACG		CGUCA UGAUGGCAUGCACAUGCGCG AUCCAACUUU	
2194	AGGUGGAUGU G ACGGG		CCCGU UGAUGGCAUGCACAUGCGCG ACAUCCACCU	
2201	UGUGACGGGC G CGUAC		GUACG UGAUGGCAUGCACAUGCGCG GCGTGUACAA	
2207	GGCGCGUAC G ACACC		GGUGU UGAUGGCAUGCACAUGCGCG GUACGCGCCC	
2243	GAAAGUAAU G UCAAC		GAUAG UGAUGGCAUGCACAUGCGCG GAUAGCTUCC	
2274	AACACGUACU G CBUUC		GCACG UGAUGGCAUGCACAUGCGCG AGUACGUGUU	
2278	CGUACUGCGU G CGUCG		UGACG UGAUGGCAUGCACAUGCGCG ACGCAGUACG	
2288	GCUCGUGUAU G CCGUG		CACGG UGAUGGCAUGCACAUGCGCG AUAACGACGC	
2306	CCAGAAGGCC G CCCAU		AUGGG UGAUGGCAUGCACAUGCGCG GGCCTUCUUG	
2322	GGGCACGUCC G CAAGG		CCUUG UGAUGGCAUGCACAUGCGCG GGACGUGCCC	
2353	UCUCUACCUU G ACAGA		UCUGU UGAUGGCAUGCACAUGCGCG AAAGUAGAGA	
2374	AGCCGUACAU G CGACA		UGUCG UGAUGGCAUGCACAUGCGCG AUGUACGGCU	
2376	CCGUACAUGC G ACAGU		ACTGU UGAUGGCAUGCACAUGCGCG GCAUGUACGG	
2395	UGGCUACCUU G CAGGA		UUCUG UGAUGGCAUGCACAUGCGCG AGGUAGCCCA	
2410	AGACCAGCCC G CUGAG		CUCAG UGAUGGCAUGCACAUGCGCG GGGCUGGUCU	
2413	CCAGCCCGCU G AGGGA		UCCCU UGAUGGCAUGCACAUGCGCG AGCGGGCTUGG	
2420	GCUGAGGGAU G CCGUC		GACCG UGAUGGCAUGCACAUGCGCG AUCCCTUCAGC	

2432	CGUCGUCAUC G AGCAG		CUCGU UGAUGGCAUGCACAUAUGCGCG GAUAGCAGCG	
2449	GCUCUCCUCCU G AAUGA		UCAUU UGAUGGCAUGCACAUAUGCGCG AGGAGAGAGC	
2453	CUCCCUUGAAU G AGGUC		GUUUU UGAUGGCAUGCACAUAUGCGCG AUUCAGGGAG	
2474	UGGCCUUCUUC G AGGUC		GACGU UGAUGGCAUGCACAUAUGCGCG GAAGAGGCCA	
2487	GUUUCUUCAC G CUUCA		UGAAG UGAUGGCAUGCACAUAUGCGCG GUAGGAAGAC	
2494	UAGGCUUCAU G UGCCA		UGGCA UGAUGGCAUGCACAUAUGCGCG AUGAAGCGUA	
2496	CGCUUCAUJU G CCACC		GUUGG UGAUGGCAUGCACAUAUGCGCG ACAUGAAGCG	
2504	GUGCCACCAC G CCGUG		CACGG UGAUGGCAUGCACAUAUGCGCG GUUGGUUCCAC	
2509	ACCAAGCCCGU G CGCAU		AUUGG UGAUGGCAUGCACAUAUGCGCG ACCGCGUUGU	
2511	CAGGCGGUGC G CAUCA		UGAUG UGAUGGCAUGCACAUAUGCGCG GCACGGCGUG	
2538	UAGUCCAGU G CCAAG		CCUGG UGAUGGCAUGCACAUAUGCGCG ACUGGACGUA	
2551	AGGGGAUCCC G CAGGG		CCUUG UGAUGGCAUGCACAUAUGCGCG GGGAUCCCCU	
2572	UCCUCUCCAC G CUUUU		AUCAG UGAUGGCAUGCACAUAUGCGCG GUUGAGAGGA	
2575	UCUCCACGCU G CUUCG		CAGAG UGAUGGCAUGCACAUAUGCGCG AGCGUGAGA	
2580	ACGUGUCUUC G CAGCC		GGUUG UGAUGGCAUGCACAUAUGCGCG AGAGCAGCGU	
2587	UCUGCAGCCU G UGCUA		UAGCA UGAUGGCAUGCACAUAUGCGCG AGGCUGCAGA	
2589	UGCAGCCUUG G CUACG		CGUAG UGAUGGCAUGCACAUAUGCGCG ACAGGCUGCA	
2597	GUUCUACGGC G ACAUG		CAUGU UGAUGGCAUGCACAUAUGCGCG GCCGUAGCAC	
2614	AUAACAAAGUU G UUUUG		GUAAA UGAUGGCAUGCACAUAUGCGCG AGCUUGUUUU	
2618	CAAGCUUUUU G CGGGG		CGCCG UGAUGGCAUGCACAUAUGCGCG AAACAGCUUG	
2641	GGGACGGGCU G CUCCU		AGGAG UGAUGGCAUGCACAUAUGCGCG AGCCCGUCCC	
2647	GGCUGCUCCU G CGUUU		AAACG UGAUGGCAUGCACAUAUGCGCG AGGAGCAGCC	
2660	UUUGGUGGAU G AUUUC		GAUAU UGAUGGCAUGCACAUAUGCGCG AUCCACCAMA	
2668	AUGAUUUUUU G UUGGU		ACCAA UGAUGGCAUGCACAUAUGCGCG AAGAAUCAU	
2674	UCUUUUUUU G ACACC		GUUUU UGAUGGCAUGCACAUAUGCGCG ACCAACACAGA	
2693	CCUACCCAC G CGAAA		UUUCG UGAUGGCAUGCACAUAUGCGCG GUUGGUGAGG	
2695	UCACCCACGC G AAAAC		GUUUU UGAUGGCAUGCACAUAUGCGCG GUUGGUGAGG	
2721	ACCUUGGUCC G AGGUG		CACCU UGAUGGCAUGCACAUAUGCGCG GGACACAGGU	
2725	GUUCCGAGGU G UUUUU		AAGGA UGAUGGCAUGCACAUAUGCGCG ACUUUGGACCC	
2732	AGUGUCCCU G AGUAU		AUAUU UGAUGGCAUGCACAUAUGCGCG AGGACACACCU	
2742	GAUAUUGGUU G CGUGG		CCACG UGAUGGCAUGCACAUAUGCGCG AGCCAUUACUC	

2749	GCTTGGTGGT G AACTT		AAATU UGAUGGCAUGGCAUGGCGG ACCACGACG	
2755	UGGUGAACUU G CGAA		UUCGG UGAUGGCAUGGCAUGGCGG AAGUUCACCA	
2770	AGACAGUGGU G AACUU		AAATU UGAUGGCAUGGCAUGGCGG ACCACUGUU	
2780	GAACUUCUU G UAGAA		UUCUA UGAUGGCAUGGCAUGGCGG AGGGAAGUUC	
2789	UGUAGAAGAC G AGGCC		GGCCU UGAUGGCAUGGCAUGGCGG GUUUUCUACA	
2813	CACGGCUUUU G UUCAG		CUGAA UGAUGGCAUGGCAUGGCGG AAAAGCGGUG	
2821	UUUUUUCAGU G CCGGC		GGCCG UGAUGGCAUGGCAUGGCGG AUCUGAACAA	
2847	UUUUUUUUU G CGGCC		GGCCG UGAUGGCAUGGCAUGGCGG ACCAGGGGAA	
2854	GGUGCGGCUU G CUGCU		AGCAG UGAUGGCAUGGCAUGGCGG AGGCCGCACC	
2857	GGGCGCUUUC G CUGGA		UCCAG UGAUGGCAUGGCAUGGCGG AGCAGGCCGC	
2881	CCCUGGAGGU G CAGAG		CUUUG UGAUGGCAUGGCAUGGCGG ACCUCCAGGG	
2888	GGUGCAGAGU G ACUAC		GUAAU UGAUGGCAUGGCAUGGCGG GUUUUCACAC	
2903	CUCCAGCUAU G CCGCG		CCGGG UGAUGGCAUGGCAUGGCGG AUAUCUGAG	
2940	ACCUUCAACC G CGGCU		AGCCG UGAUGGCAUGGCAUGGCGG GGUUGAAGGU	
2965	GGAGGAACAU G CGUCG		CGACG UGAUGGCAUGGCAUGGCGG AUGUUCCUCC	
2970	AACAUUCGUC G CAAC		GUUUU UGAUGGCAUGGCAUGGCGG GACGCAUGUU	
2989	UUUGGGUUCUU G CGGCU		AGCCG UGAUGGCAUGGCAUGGCGG AAGACCCCAA	
2995	UCUUGCGGCU G AAGUG		CACUU UGAUGGCAUGGCAUGGCGG AGCCGCAAGA	
3000	CGGCUGAAGU G UCACA		UGUGA UGAUGGCAUGGCAUGGCGG ACUUUACGCG	
3010	GUACACGCUU G UUUUU		AGAAA UGAUGGCAUGGCAUGGCGG AGGCUUGAC	
3022	UUUUUGAUUU G CAGGU		ACCUG UGAUGGCAUGGCAUGGCGG AAUUCGAGAA	
3028	AUUUGCAGGU G AACAG		CUUUU UGAUGGCAUGGCAUGGCGG ACCUGCAAAU	
3046	UCCAGACGGU G UGCAC		GUUGA UGAUGGCAUGGCAUGGCGG ACCGUCUGGA	
3048	CAGACGGUGU G CACCA		UGGUG UGAUGGCAUGGCAUGGCGG ACACGGUCUG	
3073	AGAUCCUCCU G CUGCA		UGCAG UGAUGGCAUGGCAUGGCGG AGGAGGAUUC	
3076	UCCUCCUCCU G CAGGC		GCTUG UGAUGGCAUGGCAUGGCGG AGCAGGAGGA	
3095	CAGUUUUCAC G CAUGU		ACAUG UGAUGGCAUGGCAUGGCGG GUAGAACTUG	
3099	UUUUACGCAU G UUGGC		GCACA UGAUGGCAUGGCAUGGCGG AUGCGUAGAA	
3101	UCACGCAUGU G UGCUG		CAGCA UGAUGGCAUGGCAUGGCGG ACAUGCGUGA	
3103	ACGCAUGUGU G CUGCA		UGCAG UGAUGGCAUGGCAUGGCGG ACACAUGCGU	
3106	CAUGUGUGUU G CAGCU		AGUUU UGAUGGCAUGGCAUGGCGG AGCACACAUG	

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Table V

3154	CAUUUUUCCU G CGCGU		ACGCG UGAUGGCAUGCACAUGCGCG AGGAAAAAUG	
3156	UUUUUUCCUCC G CGUCA		UGACG UGAUGGCAUGCACAUGCGCG GCAGAAAAA	
3167	CGUCAUCCU G ACACG		CGUGU UGAUGGCAUGCACAUGCGCG AGAGAUGACG	
3183	GCCUCCCUCCU G CUACU		AGUAG UGAUGGCAUGCACAUGCGCG AGAGGAGGC	
3196	ACUCCAUCCU G AAAGC		GCUUU UGAUGGCAUGCACAUGCGCG AGGAUUGAGU	
3209	AGCCAAGAAC G CAGGG		CCCUG UGAUGGCAUGCACAUGCGCG GUUCUUUGCU	
3217	ACGCAUGGAU G UCGCU		AGCUA UGAUGGCAUGCACAUGCGCG AUCCCUUGCU	
3220	CAGGGAUUG G CUGGG		CCCAG UGAUGGCAUGCACAUGCGCG GACAUCUCCU	
3236	GGCCAAGGGC G CUGGC		GCUGG UGAUGGCAUGCACAUGCGCG GUCCUUUGGC	
3239	CAAGGGCGCC G CCGGC		GCCTGG UGAUGGCAUGCACAUGCGCG GGCGCCUUG	
3250	CCGCCCCUCCU G UCCUC		GAAGG UGAUGGCAUGCACAUGCGCG AGAGGCGCG	
3257	UCUGCCCUCC G AGGCC		GGCCU UGAUGGCAUGCACAUGCGCG GGAAGGCGA	
3265	CCGAGGCCCU G CAUUG		CACUG UGAUGGCAUGCACAUGCGCG ACUGCCUCCG	
3274	UGCAGUGCCU G UGCCA		UGGCA UGAUGGCAUGCACAUGCGCG AGCCACUGCA	
3276	CAGUGGCUUGU G CCACC		GGUUG UGAUGGCAUGCACAUGCGCG ACAGCCACUG	
3292	AAGCAUUCU G CUCAA		UUAGG UGAUGGCAUGCACAUGCGCG AGGAUUGCU	
3301	UGCUCACGCU G ACUCG		CUAGU UGAUGGCAUGCACAUGCGCG AGUUUAGCA	
3306	AAGCUGACU G ACACC		GUUGU UGAUGGCAUGCACAUGCGCG GAUUCAGCU	
3314	UCGACACCCU G UCACC		GGUGA UGAUGGCAUGCACAUGCGCG ACGUGUGCA	
3325	UCACCUACGU G CCACU		AGUUG UGAUGGCAUGCACAUGCGCG ACUUAUGUGA	
3358	CAGGCCAGAC G CAGCU		AGCUU UGAUGGCAUGCACAUGCGCG GUUCUGGCUG	
3364	AGACGCAUCU G AGUCG		CGACU UGAUGGCAUGCACAUGCGCG AGUCUGUCU	
3385	UCCCGGGGAC G ACGCU		AGCCU UGAUGGCAUGCACAUGCGCG GUCCCGGGA	
3388	CGGGAGCGAC G CUGAC		GUACG UGAUGGCAUGCACAUGCGCG GUCCUCCCG	
3391	GGAGGACGCU G ACUGC		GCAGU UGAUGGCAUGCACAUGCGCG AGCGUCGUCC	
3395	GACGCUAGCU G CCCUG		CAGGG UGAUGGCAUGCACAUGCGCG AGUCAGCGUC	
3407	CCUGAGGGCC G CAGCC		GGCUG UGAUGGCAUGCACAUGCGCG GGCCUCCAGG	
3424	ACCCGGCACU G CCCUC		GAGGG UGAUGGCAUGCACAUGCGCG AGUGCCGGGU	
3453	AUCCUGACU G AUGGC		GCCAU UGAUGGCAUGCACAUGCGCG AGUCCAGAU	
3464	AUGGCCACCC G CCCAC		GUUGG UGAUGGCAUGCACAUGCGCG GGUUGGCCAU	
3479	CAGCCAAGCC G AGAGC		GCUCU UGAUGGCAUGCACAUGCGCG GUCCUUGGCU	

3501	CAGCAGCCCU G UCACG		CGUGA UGAUGGCAUGCACAUGGCGG AGGGCUGCUG	
3506	GCCCUGUCAC G CCGGG		CCCCG UGAUGGCAUGCACAUGGCGG GUAGCAGGGC	
3554	ACCCAGGCCC G CACCG		CGGUG UGAUGGCAUGCACAUGGCGG GGGCCUGGGU	
3559	GGCCCGCACG G CUGGG		CCCCG UGAUGGCAUGCACAUGGCGG GGUUGGUGCC	
3570	CUGGGAGUCU G AGGCC		GGCCU UGAUGGCAUGCACAUGGCGG AGACUCCGAG	
3577	UCUGAGGCTU G AGUGA		UCACU UGAUGGCAUGCACAUGGCGG AGGCTTCAGA	
3581	AGGCCUGAGU G AGUGU		ACACU UGAUGGCAUGCACAUGGCGG ACUCAGGCCU	
3585	CUAGUGAGU G UUUGG		CCAAA UGAUGGCAUGCACAUGGCGG ACUCACUCAG	
3593	GUUUUUGGCC G AGGCC		GGCTU UGAUGGCAUGCACAUGGCGG GGCCTAACAC	
3600	GCCGAGGCCU G CAUGU		ACAUG UGAUGGCAUGCACAUGGCGG AGGCCUCGGC	
3604	AGGCCUGCAU G UCCUG		CCGGA UGAUGGCAUGCACAUGGCGG AUGCAGGCCU	
3612	AUGUCGGCTU G AAGGC		GCCTU UGAUGGCAUGCACAUGGCGG AGCCGGACAU	
3619	GCUGAAGGCU G AGUGU		ACACU UGAUGGCAUGCACAUGGCGG AGCTTCAGC	
3623	MAGCCUGAGU G UCCUG		CCGGA UGAUGGCAUGCACAUGGCGG ACUCAGCCUU	
3631	GUUCCUGGU G AAGGC		UGCCU UGAUGGCAUGCACAUGGCGG AGCCGGACAC	
3638	GCTAGAGCCU G AGCGA		UCCGU UGAUGGCAUGCACAUGGCGG AGGCCUCAGC	
3642	AGGCCUGAGC G AGUGU		ACACU UGAUGGCAUGCACAUGGCGG GCUCAGGCCU	
3646	CUAGGCGAGU G UCCAG		CUGGA UGAUGGCAUGCACAUGGCGG ACUCGUCAG	
3661	GCCAAGGCU G AGUGU		ACACU UGAUGGCAUGCACAUGGCGG AGCCUUGGC	
3665	AGGCTUGAGU G UCCAG		CUGGA UGAUGGCAUGCACAUGGCGG ACUCAGCCU	
3678	CAGCACACCU G CCGUC		GACCG UGAUGGCAUGCACAUGGCGG AGGUUGUCUG	
3705	ACAAGCUGGC G CUCGG		CCGAG UGAUGGCAUGCACAUGGCGG GCCAGCCUGU	
3789	CCCCAGUUC G CCAUU		AAUGG UGAUGGCAUGCACAUGGCGG GAAUCUGGGG	
3795	AUUCGCCAUU G UUCAC		GUUAA UGAUGGCAUGCACAUGGCGG AAUUGCGAU	
3806	UUCACCCCTC G CCGUG		CAGGG UGAUGGCAUGCACAUGGCGG GAGGGGUGAA	
3811	CCCUCCGCCU G CCCC		GAGGG UGAUGGCAUGCACAUGGCGG AGGCTGAGGG	
3821	GCCUCCUUU G CCUUC		GAAAG UGAUGGCAUGCACAUGGCGG AAAGGAGGGC	
3854	UGGAGACCCU G AGAAG		CTUUC UGAUGGCAUGCACAUGGCGG AGGGUCUCCA	
3888	AAUUUGGAGU G ACCAA		UUUGU UGAUGGCAUGCACAUGGCGG ACUCCAAAUU	
3898	GACCAAGGU G UGCC		GGGCA UGAUGGCAUGCACAUGGCGG ACCUUUGGUC	
3900	CCAAAGGUGU G CCCC		CAGGG UGAUGGCAUGCACAUGGCGG ACACCUUUUGG	

3905	GSUGUGCCCU G UACAC		GUUA UGAUGGCAUGCACUAUGCGCG AGGGCACACC	
3915	GUACACAGGC G AGGAC		GUCCU UGAUGGCAUGCACUAUGCGCG GCCUGUGUAC	
3924	CGAGGACCCU G CACCU		AGGUG UGAUGGCAUGCACUAUGCGCG AGGUGCCUCG	
3944	GGGGUCCCU G UGGGU		ACCCA UGAUGGCAUGCACUAUGCGCG AGGACCCCC	
3966	GGGGGAGGU G CUGUG		CACAG UGAUGGCAUGCACUAUGCGCG ACCUCCCCC	
3969	GGAGGUGCU G UGGGA		UCCCA UGAUGGCAUGCACUAUGCGCG AGCACCUCCC	
3985	GUAAAUAU G AAUAU		AUAUU UGAUGGCAUGCACUAUGCGCG AGUAUUUUAC	
3993	CUGAAUAU G AGUUU		AAACU UGAUGGCAUGCACUAUGCGCG AUAUAUUCAG	
4008	UUUCAGUUU G AAAAA		UUUUU UGAUGGCAUGCACUAUGCGCG AAAACUGAAA	

Seq1 = TERT (Homo sapiens telomerase reverse transcriptase (TERT) mRNA, 4015 bp), Nakamura *et al.*, Science 277 (5328), 955-959 (1997)
Input Sequence = TERT. Cut Site = YG/M or UG/U.

Stem Length = 5/10. Core Sequence = UGAUG GCAUGCACUAUGC GCG

Table VI: Human telomerase reverse transcriptase (TERT) DNzyme and Target Sequence

nt. Position	DNzyme Sequence	Seq. ID Nos	Substrate	Seq. ID Nos
9	CAGGACGC GGCTAGCTACCAACGA AGCGCTGC		GCAGCGCT G GCGTCCCTG	
11	AGCAGGAT GGTATATTAACCA GATACGTT		AGCGCTGC G GTCTTGCT	
16	TGCGCAGC GGCTAGCTACCAACGA AGGACGCA		TGCTTCTT G GCTGCACA	
19	ACGTGCGC GGCTAGCTACCAACGA AGCAGGAC		GTCTTGCT G GCGACGCT	
21	CCACGTGC GGTATATTAACCAACGA GATACGAT		CCGTCTGC G GCACTTGG	
23	TCCCACTT GGTATATTAACCAACGA GGCACGCA		TGCTTCTT A ACTTACCA	
25	CTTCTTAC GGTATATTAACCAACGA GTGCGCAG		CTGCGCAG G GTGCGAAG	
32	GCCACGCT GGTATATTAACCAACGA TTTCTTAC		CTTACGAA G GCTCTGCG	
38	GCCGCGGC GGTATATTAACCAACGA GATACGTT		AATCTCTT G GCTCTCTG	
44	GGGTGCG GGTATATTAACCAACGA GGGGGCCA		TGCTCTCT G GCCACCC	
47	GCGGGGCT GGTATATTAACCAACGA GCTCTCTG		CTCTCTCT A ACCCTCTG	
53	GGCATCGC GGTATATTAACCAACGA GGGGCTG		CCACCTCT G GGTATGCT	
56	CGCGGAT GGTATATTAACCAACGA CGCGGGG		CGCGGAT A ATGCTCTG	
58	CGCGGCG GGTATATTAACCAACGA ATCGCGG		CGCGGAT G GCGCGCG	
61	GAGCGCG GGTATATTAACCAACGA GGCATCGC		GCGATGCT G GCGGCTC	
63	GCGAGCG GGTATATTAACCAACGA GCGGCTATC		GATGCTGCT G GCGCTCTC	
65	CGCGGAT GGTATATTAACCAACGA GCGCGGCA		TGCGCGCT G GCTCTCTG	
72	TGCGCAGC GGTATATTAACCAACGA GCGGAGCG		CGCTCTCT G GCTCTCTG	
75	GGCTCGGC GGTATATTAACCAACGA AGCGGCG		TGCTCTCT G GCGGAGCG	
80	CGCACGCT GGTATATTAACCAACGA TCGGCTATC		GTCTCTCT G GCGGCTATC	
83	GAGCGCAC GGTATATTAACCAACGA GGTCTCGGC		GCGGAGCT G GTGCGCTC	
85	GGGAGCG GGTATATTAACCAACGA AGCGGCT		CGAGCGCT G GCGCTCTC	
87	CAGGAGCT GGTATATTAACCAACGA GATACGCT		AGCTCTCT G GCTCTCTG	
94	TGCGCAGC GGTATATTAACCAACGA AGGAGCG		CGCTCTCT G GCTGCGCA	
97	GCGTGGCG GGTATATTAACCAACGA AGCAGGGA		TGCTCTCT G GCGGAGCG	
99	GTGCTGC GGTATATTAACCAACGA GATACGCT		CTGCTCTG G GCGGAGCG	
102	GATGCTCT GGTATATTAACCAACGA TCGGCTATC		GCTGCTCT G GCGCTATC	

105	GCGGTAGT GAGTAGCTACAACGA GATGTGAGT		GCGDAGCC A ACTACCGC	
108	CTGCGGCT GAGTAGCTACAACGA AGTGGCTG		CAGCCACT A ACCGGGAG	
111	CACTCGC GAGTAGCTACAACGA GATGATG		CCACTACG G GCGAGTG	
116	GCGAGCAC GAGTAGCTACAACGA CTGGCGGT		ACCGCGAG G GTGCTGCC	
118	GCGGCAGC GAGTAGCTACAACGA AACTGCGG		CGGAGGT G GCTGCCGC	
121	CCAGCGGC GAGTAGCTACAACGA AGCACTTC		GAGTGCT G GCCGCTGG	
124	TGGCCAGC GAGTAGCTACAACGA GGCAGCAC		GTGCTGCC G GCTGCCA	
128	AAGTGGC GAGTAGCTACAACGA CAGTGGTA		TGTCCTG G GCTACGTT	
131	ACGAACGT GAGTAGCTACAACGA GGCACGCG		CGCTGCC A ACGTTGCT	
133	GCAGGAAC GAGTAGCTACAACGA GTGATGAT		CTGAGGAC G GTTCCTGC	
137	CGCCGAC GAGTAGCTACAACGA GAACTGG		CCAGCTC G GTGCCCG	
139	GCGCCGC GAGTAGCTACAACGA ACGAACGT		ACGTTGCT G GCGGCCC	
142	CCAGGCGC GAGTAGCTACAACGA CAGACGAA		TTGATCG G GCGCTCG	
144	CCCAAGC GAGTAGCTACAACGA GATGATG		CGTGGC G GCTGGCG	
151	CCTGAGC GAGTAGCTACAACGA CCGAGGCG		CGCTGGG G GCCCAGG	
159	CGCCGAC GAGTAGCTACAACGA CCGGCGC		GCCCGAG G GCTGGCG	
163	CCAGCGC GAGTAGCTACAACGA CAGCTCG		CAGGCTG G GCGCTCG	
166	GCACGAC GAGTAGCTACAACGA CCGCAGCC		GGCTGCC G GCTGCTC	
170	CGCTGAC GAGTAGCTACAACGA CAGCTGCG		CGCTGCG G GTGAGCG	
172	CGGCTGC GAGTAGCTACAACGA ACGATGCG		CGCTGCG G GTGAGCG	
175	CCCTGCG GAGTAGCTACAACGA TGATACCG		CTGATCG G GCGCGCG	
177	GTCCCGC GAGTAGCTACAACGA GCTGCACT		GCTGCACT G GCGCGCG	
183	CGGCGCT GAGTAGCTACAACGA CCGCGCG		GCGCGCG A ACCCGCG	
188	AAAGCCG GAGTAGCTACAACGA CCGCTGCG		GCGCGCG G GCGCTT	
191	CGGAAAG GAGTAGCTACAACGA CCGCGCT		ACCGCGG G GCTTCTG	
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1243	TCCCAAGC GACTAGTACAAAGA AGCTCCAG		CTGAGCT G GCTTGGGA	
1251	CGCGTGT GGTAGTACAAAGA TCCCAAGC		GCTTGGGA A ACCACGC	
1254	CTGGCGGT GGCTAGTACAAAGA GGTCCCA		TGGGAAC A ACCGCAG	
1256	CACTGCGT GGTAGTACAAAGA GTGTTCC		GAACCACT G GCGCAGTG	
1258	GGCACCTGC GGTAGTACAAAGA GGTGAGT		AACCAAGC G GCAGTGC	
1261	AGGAGTAC GGTAGTACAAAGA TGGGAGT		CAGGAGT G GTTCCCT	
1263	GTAGAGGC GGTAGTACAAAGA ATTGCGG		CGGCGAGT G GCGCTTAC	
1269	CACCCCGT GGTAGTACAAAGA AGGAGCAC		GTGCCCC A ACCGAGTG	
1274	AGGAGCAC GGTAGTACAAAGA CCGGTAAG		CTAACGG G GTGTTCT	
1276	TGAGAGC GGCTAGTACAAAGA ACCCGTA		TACGGGT G GCTCTCA	
1286	CAGTGCGT GGCTAGTACAAAGA CTGAGGA		TCCTCAAG A ACCCACTG	
1288	GGCAGTGC GGCTAGTACAAAGA GTCTTGAG		CTCAAGAC G GCACTGCC	
1290	CGGGCAGT GGCTAGTACAAAGA GGTCTTG		CAAGAGC A ACTGCCG	
1293	CAGCGAGC GGCTAGTACAAAGA AGTGCCTC		GACGCACT G GCGGCTG	
1297	CTCGCAGC GGCTAGTACAAAGA GAGCAATG		CACGCCC G GCTGCGAG	
1300	CAGTTCGT GGTAGTACAAAGA AGGAGGCA		TGCTTCGT G GCGAGCTG	
1304	ACCGCAC GGTAGTACAAAGA TGGAGAG		CGCTTCGA G GCTGCGT	
1307	GTGACCGC GGCTAGTACAAAGA AGCTGCA		TGGAGCT G GCGTCCAC	
1310	GAGGTGAC GGTAGTACAAAGA GGTAGCTC		GAGTTCAG G GTTACCTC	
1313	GCTGGGT GGCTAGTACAAAGA GACCGCAG		CTGCGTC A ACCCCAGC	
1319	CCGGCTGC GGTAGTACAAAGA TGGAGTGA		TCACTCA G GTAGCTGG	
1322	ACACCGGC GGTAGTACAAAGA TGGTGGG		CCCCAGCA G GCGGCTG	
1326	ACAGACAC GGCTAGTACAAAGA GGGCTGCT		AGCAGCG G GTGCTGT	
1328	GCACAGAC GGTAGTACAAAGA ACCGCTG		CAGTTCGT G GTCTGTC	
1332	CCGGGCAC GGCTAGTACAAAGA AGACCCG		CGGTGCT G GTGCCCG	
1334	TCCCGGGC GGCTAGTACAAAGA AAGACAC		GTGTTGT G GCCCGGA	
1345	CCTGGGC GGTAGTACAAAGA TTCTCCG		CGGAGAA G GCCCCAG	
1353	CACAGAGC GGTAGTACAAAGA CTTGGGC		GCCCCAG G GCTTATG	
1358	GCCGCCAC GGTAGTACAAAGA AAGACCT		AGGAGTCT G GTGGCGC	
1361	GAGGCCGC GGTAGTACAAAGA CACAGAGC		GCTGTGT G GCGGCCCT	
1364	TGGAGGC GGTAGTACAAAGA GGTACAG		CTGTGCT G GCCCCGA	

1380	GTCTGTGT GGCTAGCTACAACGA CTTCTCTCC		GGAGGAG A ACACAGAC	
1382	GGGTCTGT GGCTAGCTACAACGA GTCTCTCT		AGAGGAG A ACAGACCC	
1386	ACGGGGGT GGCTAGCTACAACGA CTGTGTCC		GGACATAG A ACCCCGT	
1392	CAGGCGAC GGCTAGCTACAACGA GAGGCTTT		AAATCTTC G GTGCTGTG	
1395	CACCAAGC GGCTAGCTACAACGA GACGCGCG		CCCCGTC G GCTGTGTG	
1400	AGCTGCAC GGCTAGCTACAACGA CAGGCGAC		GTGCGCTG G GTGCAGCT	
1402	GCAGCTGC GGCTAGCTACAACGA AATTAGCG		CGCTGTG G GCAGCTGC	
1405	GGAGCAAC GGCTAGCTACAACGA TGGACCAAG		CTGCTGCA G GCTGTCTC	
1408	GGCGGAGC GGCTAGCTACAACGA AGCTGCAAC		GTCTAGCT G GCTCTGCG	
1413	GTGCTGGC GGCTAGCTACAACGA GGAAGCAGC		GCTGCTCC G GCCAGCAC	
1417	TGCTGTGC GGCTAGCTACAACGA TGGCGGAG		CTCCGCCA G GCACAGCA	
1419	GCTGCTGT GGCTAGCTACAACGA CTTGACCG		CTGCTAGC A ACTAGAGC	
1422	GAGGCTGC GGCTAGCTACAACGA TGTGCTGC		CTAGCTCA G GCAGCTCC	
1425	CCAGGGGC GGCTAGCTACAACGA TGGCTGTGC		GCACAGCA G GCCCTGTG	
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1448	CCCCGCAC GGCTAGCTACAACGA GAAGCGCT		ACGCTCTC G GTGCGGGC	
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1491	CTGCGCTG GGCTAGCTACAACGA CTTGCTGTG		CTGCGCTG G GCTGCTGC	
1498	CTGCGCTG GGCTAGCTACAACGA CTTGCTGTG		CTGCGCTG G GCTGCTGC	

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1503	GGGTTGGT GACTAGCTACCAAGG TGTGGCTG		CAAGCTAGA A ACGAAGC	
1507	AGCGGCGT GGCTAGCTACCAAGG TGGTTGTG		CACAAGG A ACGCGCT	
1509	GAAGCGGC GGCTAGCTACCAAGG GTTGGTTG		CAACGAC G GCCGCTC	
1512	GAGAAAGC GACTAGCTACCAAGG GAGGTTGG		CGAAGGC G GCTTCCTC	
1524	CTTGGTGT GACTAGCTACCAAGG TGTGGAGG		CGTCAAGG A ACAAGAG	
1526	TTCTTGGT GACTAGCTACCAAGG GTTCTGGA		TCAGGAC A ACCAAGA	
1534	AGATGAAC GGCTAGCTACCAAGG TTCTTGGT		ACCAAGGA G GTTCATCT	
1538	AGGGAGAT GGCTAGCTACCAAGG GAACTTCT		AGAGTTT A ATCTCCCT	
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1554	CTTGGCAT GGCTAGCTACCAAGG GCTTCCCC		GGGGAGC A ATGCCAAG	
1556	AGCTGGC GACTAGCTACCAAGG ATGCTTCC		GGAGCAT G GCCAAGCT	
1561	GCGAAGAC GACTAGCTACCAAGG TTGGCATG		CATGCTAA G GCTCTCGC	
1567	CTTCAAGC GACTAGCTACCAAGG GAGAGCTT		AAGCTCTC G GCTGCAGG	
1570	GCTCCTGC GGCTAGCTACCAAGG AGCGAGAG		CTCTCGCT G GCAAGAGC	
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1580	TTCCACGT GACTAGCTACCAAGG CAGCTTCT		AGAACTTG A ACGTGGAA	
1582	TCTTCCAC GGCTAGCTACCAAGG GTGAGCTC		GAGCTGAC G GTGGAAGA	
1589	ACGCTCAT GGCTAGCTACCAAGG CTTCGACG		CGTGGAAG A ATGAGCGT	
1593	CCGACGC GGCTAGCTACCAAGG TCATCTTC		GAAGATGA G GCGTCCG	
1595	TCCCGCAC GACTAGCTACCAAGG GTTCATCT		AGATGAGT G GTGCAGGA	
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1605	CCAAGCGC GACTAGCTACCAAGG AGTCCCGC		GCGGCAAT G GCGTTGG	
1607	AGCCAAGC GACTAGCTACCAAGG GAGTCCC		GGGACTGC G GCTTGGCT	
1612	TGCGCAGC GGCTAGCTACCAAGG CAAGCGCA		TGCGCTTG G GCTGCACA	
1615	TCCTGCGC GGCTAGCTACCAAGG AGCCAAGC		GCTTGGCT G GCGCAGGA	
1617	GCTCCTGC GACTAGCTACCAAGG GAGGCAAA		TTGGCTTG G GCAAGAGC	
1623	CTCTGAGC GACTAGCTACCAAGG TCTTGGCT		GCTGAGGA G GCCCAAGG	
1631	CAGCCAAC GACTAGCTACCAAGG CTTGGGCT		GCTTGAAG G GTTGGCTG	
1635	AACACAGC GACTAGCTACCAAGG CAACCCCT		AGGGGTTG G GCTGTGTT	

1638	CGGAACAC GGCTAGCTACAACGA AGCCAACCC	GGTTGGCT G GTGTTCCG	
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1646	TCTGCGGC GGCTAGCTACAACGA CCGAACAC	GTGTTCGG G GCCCGAGA	
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1654	GACGTTGC GGCTAGCTACAACGA TCTGGGCT	GGCGCAGA G GCACCTTC	
1656	CAGACGCT GACTAGCTACAACGA GCTCTGCG	CCGACAGC A ACCGCTCG	
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1767	GAGCTGT GGGTAGCTACAACGA TCTTTGA		TCAAAAGA A ACAGGCTC	
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1920	GATGAAGT GGCTAGCTACAACGA GGAATCTG	CAGACTCC G GCTTCATC	
1925	TTGGGAT GGCTAGCTACAACGA GAAGCGGA	TCCGCTTC A ATCCCAA	
1933	CGTCAGGC GACTAGCTACAACGA TTGGBBAT	ATCCCAA G GCCTGACG	
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1942	GCCGCAGC GACTAGCTACAACGA CCGTCAGG	CTTGAAG G GCTCCGCG	
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1948	CAATCGGC GACTAGCTACAACGA CGCAGCCC	GGGCTGCG G GCCGATTG	
1952	TTCACAAT GACTAGCTACAACGA CGGCCGCA	TGCGCGCG A ATTGTGAA	
1955	ATGTTAC GACTAGCTACAACGA AATCGGCC	GGCCGATT G GTGAACAT	
1959	GTCCATGT GACTAGCTACAACGA TCACATTC	GATTGTGA A ACATGGAC	
1961	TAGTCCAT GGCTAGCTACAACGA GTTCACAA	TTGTGAAC A ATGGACTA	
1965	GACGTAGT GGCTAGCTACAACGA CCATGTTT	GAACATGG A ACTACGTC	
1968	CACGACGT GACTAGCTACAACGA AGTCCATG	CATGGACT A ACGTCGTG	
1970	CCUACGAC GACTAGCTACAACGA GTATCCCA	TGACTATC G GTGTTGGG	
1973	GCTCCGAC GGCTAGCTACAACGA GACGTAGT	ACTAGCTC G GTGGAGC	
1979	GTTCTGCT GACTAGCTACAACGA TCCCAACGA	TGTTGGA G GCCAGAAC	
1985	CGGAACGT GACTAGCTACAACGA TCTGGCTC	GAGCCAGA A ACGTTCCG	
1987	TCCGGAAC GACTAGCTACAACGA GTTCTGCT	GUUAGAAC G GTTCCGCA	
1992	TTCTCTGC GACTAGCTACAACGA GGAAGCTT	AAUGTCC G GCAGAGAA	
2006	CGCTCGCT GACTAGCTACAACGA CTTCTTTT	AAAAAGAG G GCTGAGCG	
2011	TGAGACGC GGCTAGCTACAACGA TCGGCCCT	AGGGCCGA G GCCTCTCA	
2013	GGTGAGAC GGCTAGCTACAACGA GCTCGGCC	GGCCGAGC G GTCACCC	
2018	CTCGAGGT GGCTAGCTACAACGA GAGAGGCT	AGCGTCTC A ACCTCGAG	
2027	GCCTTCAC GGCTAGCTACAACGA CCTCGAGG	CCTCGAGG G GTGAAGGC	
2033	AACAGTGC GGCTAGCTACAACGA CTTCACCC	GGTGAAG G GCACTGTT	
2035	TGAACAGT GACTAGCTACAACGA GCTTCAC	GTGAAGCG A ACTGTCA	
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2186	ACATCCAC GGCTAGCTACAACGA CTTGACAA	TTGTCAAG G GTGGATGT	
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2208	GATGGTGT GGCTAGCTACAACGA CGTACGGG	CGCGTACG A ACACGATC	
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2227	CGGTGAGC GGGTAGCTACAACGA CTGCTCTG	CAGGATAG G GTTCACGG	
2231	ACCTTGT GGGTAGCTACAACGA GAGGCTGT	ACAGGCTC A ACGGAGGT	
2237	GGGATGAT GGGTAGCTACAACGA CTGCTTGA	TCAGGAGG G GTGATTCG	
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2243	ATGCTGGC GGGTAGCTACAACGA GATGACCT	AGGTGATC G GCCAGCAT	
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2249	TTGATGAT GGGTAGCTACAACGA GCTGGCGA	TGCGCAGC A ATCATCAA	
2252	GCTTTGAT GGGTAGCTACAACGA GATGCTGG	CCAGCATC A ATCAAACC	
2257	TCTGGGGT GGCTAGCTACAACGA TTGATGAT	ATCATCAA A ACCCGAGA	
2265	GTAAGTGT GGGTAGCTACAACGA TCTGGCGT	ACCCGAGA A ACACGTAC	
2267	CAGTAGCT GGCTAGCTACAACGA GTTCTGGG	CCGAGAAC A ACCTACTG	
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2271	CACGCACT GGGTAGCTACAACGA ACCTGTTT	GAACACGT A ACTGCGTG	
2274	ACGCAAGC GGGTAGCTACAACGA AGTACGTT	CACGTACT G GCGTGGGT	
2276	CGACGCAC GGCTAGCTACAACGA GCAGTAGC	CGTACTGC G GTGCGTGG	

2278	ACCGAOCG	GCTAGCTACAACGA	ACGCACTA		TACTGGGT	G	GCGTGGGT	
2280	ATAACGAC	GCTAGCTACAACGA	GCAACGAG		CTGCGTGC	G	GTGCGTAT	
2284	CGGCATAC	GCGTAGCTACAACGA	CGACGCAC		GTGCGTCG	G	GTATGCCG	
2286	CACGACAT	GCTAGCTACAACGA	ACCGAAGT		GCTGTGAT	A	ATGCGCTG	
2288	ACCAACGGC	GCTAGCTACAACGA	ATAACGAC		GTGCGTAT	G	GCGTGGGT	
2291	TGGACCAAC	GCTAGCTACAACGA	GGCATACG		GATATGCG	G	GTGCTCCA	
2294	TTCTGGAC	GCGTAGCTACAACGA	CACGCGAT		ATGCCGTG	G	GTCCAGAA	
2303	TGGGCGGGC	GCGTAGCTACAACGA	CTTCTGGA		TCCAGAGG	G	GCGGCCCA	
2306	CAATGAGC	GCTAGCTACAACGA	GCTCTTCT		ATAAGGCT	G	GCGCATGG	
2310	GTGCCCCAT	GCGTAGCTACAACGA	GCGCGGCG		GCGCGGCC	A	ATGCGCAC	
2314	GAACTGAC	GCTAGCTACAACGA	CCATGAGC		GCTCATGG	G	GCACTTCC	
2316	GCGGACGT	GCGTAGCTACAACGA	GCCCATGG		CCATGAGC	A	ACGTCCGC	
2318	TTGGGGAC	GCGTAGCTACAACGA	GTGCCCCAT		ATGGGGAC	G	GTCCGCAA	
2322	GAGCTTGC	GCTAGCTACAACGA	GCAAGTGC		GCAAGTGC	G	GCAAGGCC	
2327	TTGAGGAC	GCTAGCTACAACGA	CTTGGCGA		TCCGCAAG	G	GCGTTCAA	
2337	GAGCTGGC	GCTAGCTACAACGA	TCTTGAGG		CTTCAAGA	G	GCCACGTC	
2340	AGAGACGT	GCTAGCTACAACGA	GCTCTTGG		CAAGAGCC	A	ACGTCTCT	
2342	GTAGAGAC	GCTAGCTACAACGA	GTAGCTCT		AGAGCAAC	G	GTCTCTAC	
2348	GTCAAGGT	GCTAGCTACAACGA	AGAGACGT		ACGTCTCT	A	ACCTTGAC	
2354	AGGTCTGT	GCTAGCTACAACGA	CAGGTAG		CTACTTGG	A	ACAGACCT	
2358	CTGGAGGT	GCTAGCTACAACGA	CTGTCCAG		CTTGACAG	A	ACCTCCAG	
2365	TGTACGGC	GCTAGCTACAACGA	TGGAGGTC		GACTTCCA	G	GCGGTACA	
2368	GCAATGTAC	GCGTAGCTACAACGA	GCGTGGAG		CTCCAGCC	G	GTACATGC	
2370	TGGCATGT	GCTAGCTACAACGA	ACGCTGGG		CCAGCTGG	A	ACATGGGA	
2372	TGTGCGAT	GCTAGCTACAACGA	GTAACGCT		AGCGGTAC	A	ATGGGACA	
2374	ACTGTGGC	GCTAGCTACAACGA	ATGTACGG		CGGTACAT	G	GCGACAGT	
2377	CGAATGAT	GCTAGCTACAACGA	CGCATGTA		TACATGGG	A	ACAGTTCG	
2380	CCAGGAAC	GCTAGCTACAACGA	TGTGCGAT		ATGCGACA	G	GTTCGTGG	
2384	TGAGCCAC	GCGTAGCTACAACGA	GAACTGTC		GACAGTTC	G	GTGGCTCA	
2387	AGGTGAGC	GCGTAGCTACAACGA	CACGAACCT		AGTTGCTG	G	GCTCACCT	
2391	CTGCAGGT	GCTAGCTACAACGA	GAGCCACG		GCTGCGTC	A	ACCTGGCAG	

2395	TCTCCTGC GACTAGCTACAAAGA AGATTGAGC		GCTCAACT G GCAAGAGA	
2402	GGGCTGGT GATTAGCTACAAAGA CTCTCTGCA		TGTATGAG A ACCAAGCC	
2406	CAAGAGGC GACTAGCTACAAAGA TGGTCTTCC		GGAGACCA G GCGCGCTG	
2410	CCCTTAAGT GACTAGCTACAAAGA GGGCTGGT		ATTAGACT G GCTGAGGG	
2418	GACGGCAT GACTAGCTACAAAGA CCTCTAGC		GCTGAGGG A ATGCCGTC	
2420	ACGACGGC GACTAGCTACAAAGA ATCCCTCA		TGAGGGAT G GCGTCTGT	
2423	ATGACGAC GACTAGCTACAAAGA GGGATCCC		GGGATGCC G GTCTCAT	
2426	TGGATGAC GACTAGCTACAAAGA GAGGGCAT		ATGCTGTC G GTCATCGA	
2429	TGCTCGAT GACTAGCTACAAAGA GACGACGG		CCGTCTTC A ATCGAGCA	
2434	AGCTCTGC GACTAGCTACAAAGA TGGATGAC		GTATATGA G GTAGAGCT	
2439	GGAGGAGC GACTAGCTACAAAGA TCTGCTCG		CGAGCAGA G GCTCCTCC	
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2456	CTGCTGGC GACTAGCTACAAAGA CTCATTCA		TGAATGAG G GCCAGCAG	
2460	GCCACTGC GACTAGCTACAAAGA TGGCTTCA		TGAGGCCA G GCAGTGGC	
2463	GAGGCCAC GACTAGCTACAAAGA TGGTGGCC		GGCCAGCA G GTGGCCTC	
2466	GAAGAGGC GACTAGCTACAAAGA CACTGCTG		CAGCAGTG G GCTCTCTC	
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2487	CATGAAGC GACTAGCTACAAAGA GTAGGAGG		CTTCTTAC G GTTTCATG	
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2538	CCCTTGGC GGGTAGCTACAAAG ACTTAAAG	CTTTTAA T G GTAGGGG	
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2551	AGCCCTGC GGGTAGCTACAAAG GGGATCCC	GGATCCC G GAGGGCT	
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2572	AGAGCAGC GGGTAGCTACAAAG GTGGAGAG	CTCTCCAC G GCTGCTCT	
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2624	CGCCGAT GGGTAGCTACAAAG CCCCAGAA	TTGCGGG A ATTGGCG	
2629	CGTCCGCG GGGTAGCTACAAAG CGAATCCC	GGGATTGG G GCGGGACG	
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2638	GGAGTAGC GGGTAGCTACAAAG CCGTCCCG	CGGAGGG G GCTGCTCC	
2641	GCAGSAGC GGGTAGCTACAAAG AGCCCGTC	GACGAGCT G GCTCTTGC	
2647	CCAAACGC GGGTAGCTACAAAG AGGAGCAG	CTGCTTCT G GCGTTTGG	
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2672	GGTGTAC GGCTAGCTACAACGA CACAAGA		TCTTGTG G GTGACACC	
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2742	CACCAAGC GACTAGCTACAACGA AGCCATAC		GTATGCT G GCGTGGTG	
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3395	TCCAGGGC GGTAGCTACAACGA AGTACGGG	CGCTGACT G GCCCTGGA	
3404	GCTGCGGC GGTAGCTACAACGA CTTCAGGG	CGCTGGAG G GCGGTAGC	
3407	TTGGCTGC GGTAGCTACAACGA GGCTCTCA	TGGAGGCC G GCAGCCAA	
3410	GGGTTGGC GGTAGCTACAACGA TGGCGGCT	AGCCCGCA G GCCAACCC	
3414	TGCGGGGT GGTAGCTACAACGA TGGCTGGG	CGCAGGCA A ACCCGGCA	
3419	GGCAGTGC GGTAGCTACAACGA CCGGTTGG	CTAACCTG G GCACGGCC	
3421	AGGGCAGT GGTAGCTACAACGA GCGGGGTT	AACCTGGG A ACTTCCCT	
3424	CTGAGGGC GGTAGCTACAACGA AGTGGTGG	CGGGCACT G GCCCTGAG	
3432	CTTGAGT GGTAGCTACAACGA CTGAGGGC	GCCCTGAG A ACTTCAAG	
3440	AGGATGGT GGTAGCTACAACGA CTTGAGT	ACTTCAAG A ACCATCCT	
3443	TCCAGGAT GGTAGCTACAACGA GGTCTTGA	TGAGGATC A ATCTGGA	
3450	CCATCAGT GGTAGCTACAACGA CCGAGATG	CATCCTGG A ACTGATGG	
3454	GTGGCCAT GGTAGCTACAACGA CAGTCCAG	CTGAGATG A ATGGCCAC	

3457	CGGGTGGC GGCTAGCTACAAAGA CATCAATC		GACTGATG G GCTAACCG	
3460	GGGCGGGT GACTAGCTAACAAAGA GAGCATCA		TGATGATC A ACCCGCCC	
3464	CTGTGGGC GGCTAGCTAACAAAGA GGGTGGCC		GGCCACCC G GCCCAAG	
3468	CTGGCTGT GGCTAGCTAACAAAGA GAGTAAAT		ACTGATCC A ACAGCCAG	
3471	GGCTGGC GGCTAGCTAACAAAGA TGAGGGCG		CGCCACA G GCCAGCC	
3476	CTCTGGC GGCTAGCTAACAAAGA CTGGCTGT		ACAGCCAG G GCCAGAG	
3483	GTGTCTGC GGCTAGCTAACAAAGA TGTGGGCT		GGCGAGA G GCAGAC	
3487	GCTGTGT GGCTAGCTAACAAAGA CTGCTCTC		GAGAGCAG A ACACAGC	
3489	CTGCTGGT GGCTAGCTAACAAAGA GTCTGCTC		GAGCAGAC A ACCAGCAG	
3493	AGGGCTGC GGCTAGCTAACAAAGA TGCTGTCT		AGACACCA G GCAGCTCT	
3496	GACAGGGC GGCTAGCTAACAAAGA TGCTGTGT		CACCACTA G GCCCTGTC	
3501	GGCTGAC GGCTAGCTAACAAAGA AGGGCTGC		GCATCTCT G GTCACGC	
3504	CCCGGGT GGCTAGCTAACAAAGA GATAGGGC		GGCTGTC A ACGCGGG	
3506	AGCCGGC GGCTAGCTAACAAAGA GTACAGG		CCTGTAC G GCCGGCT	
3511	CGTAGAGC GGCTAGCTAACAAAGA CGGGCTG		CAGGCCG G GCTTACG	
3516	TGGACGT GGCTAGCTAACAAAGA AGAGCCCG		CGGGCTCT A ACTGCCA	
3518	CCTGGAC GGCTAGCTAACAAAGA GTAGAGCC		GGCTTAC G GTCCAGG	
3535	TGGGCCGC GGCTAGCTAACAAAGA CCGTCCCT		AGGAGAG G GCGGCCA	
3538	GTGTGGC GGCTAGCTAACAAAGA CGGCTCTC		GAGGGCTG G GCCACAC	
3542	CTGGTGT GGCTAGCTAACAAAGA GGGCTGCC		GGCGGCC A ACACCAAG	
3544	GCCTGGT GGCTAGCTAACAAAGA GTGGGCCG		CGGCTAC A ACCGAGC	
3550	GTGCGGC GGCTAGCTAACAAAGA CTGGGTGT		ACACCCAG G GCCCGAC	
3554	AGCGGTGC GACTAGCTAACAAAGA GGGCTGTG		CCAGGCC G GCATCGCT	
3556	CCAGCGT GGCTAGCTAACAAAGA GCGGCTCT		AGGCTGC A ACCGCTG	
3559	CTCCAGC GGCTAGCTAACAAAGA GGTGGGGG		CCCGACC G GCTGGAG	
3566	CCTCAGC GGCTAGCTAACAAAGA TCCAGCG		CGCTGGG G GTTAGG	
3573	ACTCAGC GGCTAGCTAACAAAGA CTCAGACT		AGCTGAG G GCCTAGT	
3579	ACACTAC GACTAGCTAACAAAGA TCGGGCT		AGGCTGA G GTAGTGT	
3583	CCAACAC GACTAGCTAACAAAGA TCACTCAG		CTGAGTA G GTGTTGG	
3585	GGCCAAC GACTAGCTAACAAAGA ACTCACTC		GAGTAGT G GTTGGCC	
3590	GGCTCGC GACTAGCTAACAAAGA CAACTACT		AGTATTG G GCCGAGC	

3596	ATGCAAGC GACTAGCTACAAAGG CTGGGCGA	TGGCCGAG G GCGTCAT	
3600	GGACATGC GACTAGCTACAAAGG AGGCTCTG	CGAGCTCT G GCATGTCC	
3602	CGGACAT GACTAGCTACAAAGG GAGGCTCT	AGGCTCTG A ATGTCCG	
3604	AGGCGAGC GACTAGCTACAAAGG ATGTAGCT	GCTTCAT G GTCCGGCT	
3609	CCTCAGC GGCTAGCTACAAAGG CGGACATG	CATGTCCG G GCTGAAG	
3616	CACTAGC GACTAGCTACAAAGG GTTCAGCT	GCTGAAG G GCTGACTG	
3621	CGGACAT GACTAGCTACAAAGG TCAGCTCT	AAAGCTGA G GTGTCCG	
3623	AGCGGAGC GACTAGCTACAAAGG ACTCAGCC	GGCTGAGT G GTCCGGCT	
3628	GCTCAAGC GACTAGCTACAAAGG CGGACAT	AGTCTCTG G GCTGAGCC	
3634	GCTCAGC GACTAGCTACAAAGG CTCAGCTG	CGGCTGAG G GCTGAGC	
3640	ACACTCGC GACTAGCTACAAAGG TCAGGCTCT	AGGCTTGA G GCGAGTGT	
3644	CTGGACAC GGCTAGCTACAAAGG TCGCTCAG	CTGAGCGA G GTGTCCAG	
3646	GACTGAGC GACTAGCTACAAAGG ACTCGCTC	GAGCTGAGT G GTTCAGCC	
3651	CCCTTGGC GACTAGCTACAAAGG TCGACACT	AGTCTTGA G GCTAAGGG	
3658	CACTAGC GACTAGCTACAAAGG CTCAGCTCT	AGGCTGAG G GCTGAGTG	
3663	CTGGACAC GACTAGCTACAAAGG TCAGGCTCT	AGGCTTGA G GTGTCCAG	
3665	TGCTGAGC GACTAGCTACAAAGG ACTCAGCT	GCTGAGT G GTTCAGCA	
3670	AGTGTGTC GACTAGCTACAAAGG TCGACACT	AGTGTGCA G GCACACTCT	
3672	GCAGGTGT GACTAGCTACAAAGG GCTGGACA	TGTCCAGC A ACACCTGC	
3674	CGGACAGT GACTAGCTACAAAGG GTGCTGGA	TCCAGCAC A ACCTGCCG	
3678	AAGACGAC GACTAGCTACAAAGG AGTGTGTC	GCACACTCT G GCTGCTCT	
3681	GTGAAGAC GACTAGCTACAAAGG GATAGCTG	CACCTGACT G GTCTTCAC	
3687	GGGGAAGT GACTAGCTACAAAGG GAGACAGG	CGGTCTTG A ACTTCCCC	
3695	CAGCTGT GACTAGCTACAAAGG GAGGAAGT	ACTTCCCG A ACAGGCTG	
3699	GGCCAGC GACTAGCTACAAAGG CTGTGCGG	CCCCACAG G GCTGGCGC	
3703	CCGAGCGC GACTAGCTACAAAGG CAGCTGTCT	ACAGGCTG G GCGCTCGG	
3705	AGGCGAGC GACTAGCTACAAAGG GCTGAGCT	AGGCTGAGT G GCTGAGCT	
3710	GCTGAGC GACTAGCTACAAAGG GAGGCGCT	GAGGCTG G GCTGAGC	
3715	CCTGGGCT GACTAGCTACAAAGG GAGGCGG	TGGGCTTG A ACCGCAAG	
3723	AAGCTGCT GACTAGCTACAAAGG GCTGAGCT	ACGCTGAGT G GCTGAGCT	
3727	GGAAGC GACTAGCTACAAAGG TGGGCTG	CAGGCGCA G GCTTTC	

3737	CTCCTGAT GACTAGCTACAAAGA GAGTAAAA		TTTTCCTT A ACCAGSAG	
3744	AGCCGAGG GACTAGCTACAAAGA TCCCTGCTG		CAACAGGA G GCCCGGCT	
3749	GTGGAAGC GACTAGCTACAAAGA CAGATCTTC		GAGAGCCG G GCTTCCAC	
3755	TGGGGAGT GACTAGCTACAAAGA GGAAGCCG		CGCTTTC A ACTCCCA	
3762	TCCATATG GACTAGCTACAAAGA GGGAGTGT		CACCTCCC A ACATAGGA	
3764	ATTCCATAT GACTAGCTACAAAGA GTGGAGAG		CTCCCCAC A ATAGGAAT	
3770	TGGACTAT GACTAGCTACAAAGA TCCATATG		ACATAGGA A ATAGTCCA	
3773	GGATGGAC GACTAGCTACAAAGA TATTCCTA		TAGGAATA G GTCCATCC	
3777	CTGGGGAT GACTAGCTACAAAGA GACTATAT		AATAGTCC A ATCCCTAG	
3785	TGGCGAAT GACTAGCTACAAAGA CTAGGAT		ATCCCCAG A ATTGCCA	
3789	ACAATGGC GACTAGCTACAAAGA GATCTGAG		CCAGATTG G GCCATTGT	
3792	TGAACAAT GACTAGCTACAAAGA GGGGAATC		GATTGGCC A ATTGTTCA	
3795	GGGTGAAC GACTAGCTACAAAGA AATGGCGA		TGCCCATT G GTTCACCC	
3799	CGAGGGGT GACTAGCTACAAAGA GAACAATG		CATTGTTG A ACCCCTCG	
3806	GGCAGGGC GACTAGCTACAAAGA GAGGAGTG		CACCCCTG G GCCCTGCC	
3811	AGGAGGGC GACTAGCTACAAAGA AGGCGCAG		CTGGCCCT G GCCCTCCT	
3821	TGGAAGGC GACTAGCTACAAAGA AAGGAGAG		CCTCCTTT G GCCTTCCA	
3828	GTGGGGGT GACTAGCTACAAAGA GGAAGGCA		TGCTTTC A ACCCCGAC	
3834	TGGATGGT GACTAGCTACAAAGA GAGGAGTG		CAATTCCT A ACCATCCA	
3837	ACCTGGAT GACTAGCTACAAAGA GATGGGAG		CCCCCAG A ATCGAGT	
3843	GTCTCCAC GACTAGCTACAAAGA CTGATATG		CTATCCAG G GTGAGAGC	
3849	CTCAGGGT GACTAGCTACAAAGA CTCCACCT		AGGTGAG A ACCCTGAG	
3861	CCCAGGGT GACTAGCTACAAAGA CCTCTCCA		TGAGAGG A ACCCTGGG	
3870	CCCAGAGC GACTAGCTACAAAGA TCCCAAGG		CCCTGGGA G GCTCTGGG	
3879	CTCTAAT GACTAGCTACAAAGA TCCCAAGG		CTCTGGGA A ATTGGAG	
3886	TTGGTCAC GACTAGCTACAAAGA TCCAAATT		AATTGGA G GTGACCAA	
3889	CCTTTGGT GACTAGCTACAAAGA CACTCCAA		TTGGAGTG A ACCAAAGG	
3896	GAGCACAC GACTAGCTACAAAGA CTTTGCTC		GACCAAG G GTGTACCC	
3898	CAGGGCAC GACTAGCTACAAAGA ACTTTTGG		CCAAAGGT G GTGCCCTG	
3900	TACAGGGC GACTAGCTACAAAGA AACCTTTT		AAAGGTGT G GCCCTGTA	
3905	CTGTGTAC GACTAGCTACAAAGA AGGTCACA		TGTGCTCT G GTACACAG	

3907	GCCTGTGT GACTAGTACCAACGA AGAAGGGA		TGCTGTGT A ACACAGGC	
3909	TGCTGTGT GACTAGTACCAACGA GTACAGGG		CGCTGTAC A ACAGGCGA	
3913	GTCTCGC GACTAGTACCAACGA CTGTGTAC		GTACACAG G GCGAGGAC	
3919	TGCAGGGT GACTAGTACCAACGA CTGTGTCT		AGGCGAGG A ACCTTCCA	
3924	CCAGGTGC GACTAGTACCAACGA AGGCTCCT		AGGACCTT G GCACCTGG	
3926	ATCCAGGT GGCTAGTACCAACGA GCAGGGTC		GAACCTGC A ACCTGGAT	
3932	ACCCCGAT GACTAGTACCAACGA CCAGGTGC		GCACCTGG A ATGGGGGT	
3938	ACAGGAC GACTAGTACCAACGA CTTCTATTC		GTATGAGG G GTCCCTGT	
3944	TGACCCAC GACTAGTACCAACGA AGGACCTC		GGTCCCT G GTGGGTCA	
3948	AATTGAC GGCTAGTACCAACGA CCACAGGG		CCCTGTGG G GTCAATT	
3953	CCCCCAAT GACTAGTACCAACGA TTGACCGA		TGGGTCAA A ATTGAGGG	
3964	CACAGCAC GACTAGTACCAACGA CTCCCCCC		GCGCGGAG G GTGCTGTG	
3966	CCACAGC GACTAGTACCAACGA ATTCTTCT		GAGGAGGT G GTGTGAG	
3969	ACTCCAC GACTAGTACCAACGA AGGACCTC		GAGGTGCT G GTGGAGT	
3975	TATTTAC GGCTAGTACCAACGA TCCACAG		CTGTGGA G GTAAATA	
3980	TTCAGTAT GACTAGTACCAACGA TTTACTGC		GGAGTAA A ATACTGAA	
3982	TATTCAGT GACTAGTACCAACGA ATTTTACT		AGTAAAT A ACTGATA	
3987	TCATATAT GACTAGTACCAACGA TCAGTATT		AATACTGA A ATATATGA	
3989	ACTCATAT GGCTAGTACCAACGA ATTGAGTA		TACTGAAT A ATATGAGT	
3991	AAACTCAT GGCTAGTACCAACGA ATATTGAG		CTGAATAT A ATGAGTT	
3995	TGAAAAAC GGCTAGTACCAACGA TCATATAT		ATAATAGA G GTTTTCA	
4003	TTCAAAAC GGCTAGTACCAACGA TGAAAAAC		GTTTTCA G GTTTGAA	

Seq1 = TERT (Homo sapiens telomerase reverse transcriptase (TERT) mRNA, 4015 bp), Nakamura *et al.*, Science 277 (5328), 955-959 (1997)

Cut Site = R/Y (Purine/Pyrimidine)

Stem Length = 8. Core Sequence = GGCTAGCTACCAACGA

Table VII: Anti-TERT HH and G-Cleaver Ribozymes

Alias	Ribozyme Sequence	Length (nt)
HH		
TERT-1051	AGGAGUA CUGAUGAGGCCGUAAGGCCGAA AGGAAGU	36
TERT-1053	UGAGGAG CUGAUGAGGCCGUAAGGCCGAA AGAGGAA	36
TERT-1918	UGAAGCG CUGAUGAGGCCGUAAGGCCGAA AGUCUGG	36
TERT-2383	GAGCCAC CUGAUGAGGCCGUAAGGCCGAA AACUGUC	36
TERT-2485	UGAAGCG CUGAUGAGGCCGUAAGGCCGAA AGGAAGA	36
TERT-2566	GCGUGGA CUGAUGAGGCCGUAAGGCCGAA AGGAUGG	36
TERT-3181	AGUAGCA CUGAUGAGGCCGUAAGGCCGAA AGGGAGG	36
TERT-3691	CUGUGGG CUGAUGAGGCCGUAAGGCCGAA AAGUGAA	36
TERT-3758	AUGUGGG CUGAUGAGGCCGUAAGGCCGAA AGUGGAA	36
TERT-3794	GGUGAAC CUGAUGAGGCCGUAAGGCCGAA AUGGCGA	36
G-Cleaver		
TERT-757	UUGGG UGAUGGCAUGCACUAUGCGCG AACGGCAGAC	36
TERT-2353	UCUGU UGAUGGCAUGCACUAUGCGCG AAGGUAGAGA	36
TERT-3795	GUGAA UGAUGGCAUGCACUAUGCGCG AAUGGCCAAU	36